



REPUBLIC OF THE PHILIPPINES  
DEPARTMENT OF FINANCE  
**BUREAU OF CUSTOMS**

08 July 2019

**CUSTOMS MEMORANDUM CIRCULAR**  
**no. 164- 2019**

To: The Assistant Commissioner  
All Deputy Commissioners  
All Directors and Division Chiefs  
All District/Port Collectors  
And Others Concerned

**SUBJECT: OP MC No. 62/Phil. Export Development Plan 2018-2022**

Attached is a certified copy of the Memorandum Circular No. 62 from the Office of the President approved on 26 June 2019 entitled:

**"APPROVING THE PHILIPPINE EXPORT DEVELOPMENT PLAN 2018-2022 AND DIRECTING THE CONCERNED AGENCIES TO REVIEW ALL RELEVANT POLICIES TO ENSURE THE IMPLEMENTATION THEREOF".**

For your information and guidance.

For record purposes, please confirm the dissemination of this circular throughout your offices within fifteen (15) days from receipt hereof.

**REY LEONARDO B. GUERRERO**

Commissioner  
JUL 11 2019



BOC-09-04074

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Republic of the Philippines

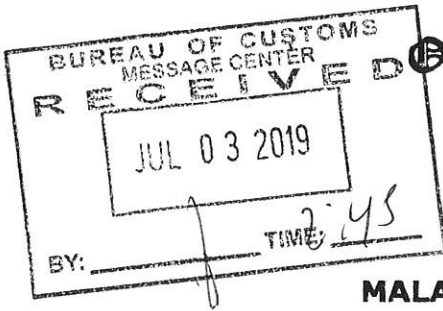
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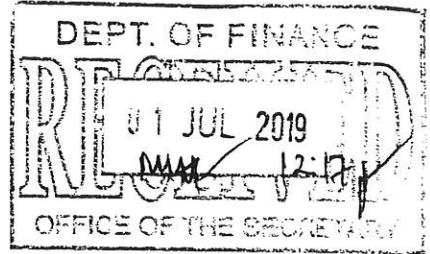
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Manila, June 28, 2019

SECRETARY CARLOS G. DOMINGUEZ III  
Department of Finance  
Manila



Sir:

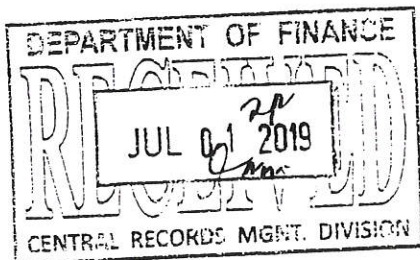
I have the honor to transmit for your information and guidance, a certified copy of Memorandum Circular No. 62 dated June 26, 2019 entitled **"APPROVING THE PHILIPPINE EXPORT DEVELOPMENT PLAN 2018-2022 AND DIRECTING THE CONCERNED AGENCIES TO REVIEW ALL RELEVANT POLICIES TO ENSURE THE IMPLEMENTATION THEREOF"**.

Thank you.

Very truly yours,

*[Handwritten signature]*

ATTY. CONCEPCION ZENY E. FERROLINO-ENAD  
Director IV





MASTER COPY

MALACAÑAN PALACE  
MANILA

BY THE PRESIDENT OF THE PHILIPPINES

**MEMORANDUM CIRCULAR NO. 62**

**APPROVING THE PHILIPPINE EXPORT DEVELOPMENT PLAN 2018-2022 AND DIRECTING THE CONCERNED AGENCIES TO REVIEW ALL RELEVANT POLICIES TO ENSURE THE IMPLEMENTATION THEREOF**

**WHEREAS**, Article II, Section 5 of Republic Act (RA) No. 7844 or the "Export Development Act of 1994" provides that the President shall approve the Philippine Export Development Plan (PEDP) prepared by the Department of Trade and Industry (DTI), which shall form part of the Philippine Development Plan (PDP);

**WHEREAS**, the PDP 2017-2022 emphasizes a strategic external trade policy regime which enables Philippine enterprises to successfully compete in global markets and provide employment opportunities for Filipinos;

**WHEREAS**, synchronizing the period of the PEDP with that of the PDP will be conducive to harmonizing the implementation of programs and to the continuity and consistency of policies and innovative strategies for boosting export growth and increasing job opportunities for Filipinos;

**WHEREAS**, Section 7(a) of RA No. 7844 mandates the Export Development Council (ExDC) to approve the PEDP, and coordinate, monitor and assess its implementation; and

**WHEREAS**, the ExDC has endorsed the PEDP 2018-2022 for approval of the President in its Resolution No. 2 (s. 2018);

**NOW, THEREFORE**, pursuant to the provisions of Article II of RA No. 7844, the attached PEDP 2018-2022 is hereby **APPROVED**.


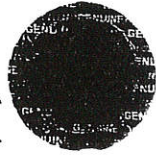
Within sixty (60) days after the effectivity of this Circular, all concerned government agencies shall submit to the ExDC and the Office of the President an inventory of relevant policies, programs and action plans which are aligned with the strategies under the PEDP. These agencies shall implement such policies, programs and action plans to boost export growth and ensure the free flow of goods, in accordance with the PEDP 2018-2022, PDP 2017-2022 and Memorandum Circular No. 27 (s. 2017).

THE PRESIDENT OF THE PHILIPPINES



The ExDC shall ensure the biannual validation and updating of the PEDP pursuant to the provisions of RA No. 7844 and in the context of the PDP.

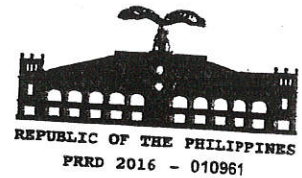
This Circular shall take effect immediately.



**DONE** in the City of Manila, this 26<sup>th</sup> day of June, in the year of our Lord, Two Thousand and Nineteen.

By the President:

  
**SALVADOR C. MEDIALDEA**  
Executive Secretary 



Office of the President  
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ATTY. CONCEPCION Z. PEROLINO-ENAO  
7-6-2019 DIRECTOR IV 



**The Philippine Export Development Plan**  
2018 - 2022



## Executive Summary

The starting point for PEDP 2018-22 is the PDP's (2017-2022) end-period target for exports of goods and services of US \$ 122 Billion to US \$ 130.8 Billion representing low and high ends of the target. The task for PEDP 2018-22 is determining the feasibility of the targets that would synchronize the PEDP with the 6-year program of the Duterte administration (the PEDP 2018-22 five-year timetable is to catch up with PDP). The exports targets are seen to significantly contribute to short to medium term development objectives in the PDP and in ensuring they are integral to the long-term vision of the country as *Ambisyon 2040*. Thus instead of the usual PEDP as 3-year rolling plan under the Export Development Act (RA 7844) the PEDP 2018-22 extends until the end-period of the PDP. This effectively makes the PEDP integral to the medium-term plan in PDP. As such the scan for its horizon should consider new developments in industry and services that may affect their trade either during the 5-year plan or beyond. In fact these developments become more critical if the PDP and PEDP are to effectively contribute to attaining the long-term vision in *Ambisyon 2040*

To ascertain the feasibility of the exports target the required CAGRs between the base year 2016 and end-period 2022 are examined if in the recent past experience exports of goods and services have had these annual growth rates. Upon review and assessment the historical growth rate between 2006 and 2012 appears to achieve the low end of the exports targets. For one, it had the higher annual growth rate for both goods and services exports with the highest growth rate for goods exports. For another the mid-years between 2006 and 2016 show a slowdown not only for the Philippines but for world trade in general. Finally while services exports continued their upswing into 2014 their growth rates in 2006-12 remained robust.

The assessment that PDP exports targets are feasible requires identifying their possible sources and their likelihood in realizing the targets. In preparation for PEDP 2018-22, the EDC convened stakeholders from various export sectors, the government agencies involved in export development, and others to collectively map out an array of goods and services product groups seen to propel the realization of the targets by end-period 2022. Some 13 of goods exports are part of the sources for increased revenues during the PDP. These exports have a

total share of all goods exports in 2016 at 57.2%. The individual exports products' revenue by 2022 were reviewed in the EDC with the results that these are expected to grow annually at 7% well within the past experience.

Another potential source of goods exports to contribute to attaining end-period targets comes from collating specific product groups found in the International Trade Center trade map. Combined with data on annual growth rates for imports of these products, shares to world exports, and concentration ratios of importing countries, among others, the sum of these exports in 2016 is US \$ 22.5 Billion, or US \$ 9.53 Billion when integrated circuits are netted out. What would be the target revenues for these exports products is not indicated in the collected data but a simple assumption would be to follow the consideration in the EDC list and in the historical annual growth rates.

The Trade Map created for PEDP 2015-17 provided a picture of the characteristics of Philippine exports in terms of their growth relative to world growth for similar products and in terms of their ability to raise, avoid declines, and keep their shares in world markets. What the exercise revealed is the limitations of Philippine exports – between 2006 and 2013 more than half of these lost market shares and more than two-thirds were annually growing slowly than the rest of the world. Consequently it is difficult to imagine their prospects reckoned in terms of reaching some targets.

The analogous Trade Map created for PEDP 2018-22 for the period 2013-16 reveals a different picture. Many exports of goods show annual growth rates higher than peers in world markets but have also gained market shares – some 62% of the 57-plus product clusters are champions. Notable among them are fruits and vegetables (fresh, preserved, canned) and electronics (components and devices, control and instrumentation, electronic data processing, office equipment), many having kept their characteristics. Only a small number of exports (2% or 10 product groups) are laggards where market shares are declining and annual growth rates below similar products. In short, better conditions suggesting better prospects and expanding opportunities.

The more important observation from the 2 trade maps is the implied dynamic changes among exports products over time. Many exports which were laggards had managed to move up to becoming champions indicating a promise

of revival – for example, footwear and textile yarns and fabrics as well as garments (from laggard to underachiever) and consumer electronics. The shift from laggards to other characterization (achiever and underachiever) reveals that targets have more chances of being reached and attained.

The EDC also carried out a similar exercise for services exports which procedure was followed to establish the feasibility of meeting 2022 targets. The number of selected services exports targeted into 2022 is less than those identified for goods exports but occupy a larger share of total services exports – in 2016, 82.9% were evaluated for their end-period revenues.

Four other services which were not considered in the EDC deliberations were added as sources for reaching targets for the export of services – manufacturing services on physical inputs owned by others, transportation services, financial services, and personal, cultural, and recreational services. The first comes from the use of BOP Manual 6 which shifts significant export revenues from goods exports to services exports. These are products assembled from imported components on consignment (hence owned by others). The second to the fourth items are increasingly traded and assuming some importance to overall services exports. These 4 other services earned US\$ 4.5 Billion in 2016 and can be counted upon in reaching 2022 targets.

The Trade Map for services exports in PEDP 2015-17 depicts more upbeat characterizations. Majority of these exports have increased their market shares between 2006 and 2013 and over half have had annual growth rates better than world averages. An inherent bias in the distribution of services exports comes from the weight exerted by other business services which unduly tilt in whatever direction these services move. Thus of the 58% of services exports which are champions, a large part of these are in other business services despite there being 2 other services (personal, cultural, and recreational services, and insurance and pensions). The laggards of these services exports are travel and tourism services, financial services and construction services, meaning exports of these services have lost market shares and have annual growth rates below world averages. Though based only on its growth rate in 2016-17, travel i.e., tourism-related services exports surged at 35% twice that of BPO (though at a low-base) suggesting a hard look at putting some emphases on this services potential.



The services exports' Trade Map for PEDP 2018-22 has about the same distribution as in the previous period's Trade Map. The dynamic shifts however are as prominent as those in the goods exports. The share of services exports that are champions further increased from 58% to 73% while those which were achievers dramatically falls from 20% of all services exports to 7%. The number of services exports which are laggards have remained about the same at 21% in PEDP 2015-17 to 19% in PEDP 2018-22 i.e., between 2006-13 and 2013-16. This suggests better confidence in achieving the targets set for services exports at end-period 2022.

These sources of increases in goods and services exports towards reaching the targets set in the PDP fall short because the identified exports products and services do not exhaust all those traded in 2016. This is particularly true for goods exports. There is therefore a gap that needs to be further specified ranging from US \$ 4.9 Billion to US \$ 19.8 Billion. The analysis – how these targeted exports have behaved, their apparent dynamism reflected in the comparative trade maps, and the recovering international markets – augur well that not only those identified exports may exceed their targets but new ones that are yet to evolve can eventually fill up the gaps and achieve the planned exports.

Since PEDP 2018-22 is in synch with PDP more as medium-term plan it is necessary to scan a longer (than the usual 3-year PEDP) horizon of industry and services that may influence their trade. What seems to be a looming disruption is Industry and Services 4.0 which lately has accelerated in applications and likely to affect industry and services. In few words, the seminal Industry 4.0 is the use of combinations of digital technologies that results in more efficient manufacturing processes, optimal use of resources, and interconnected outside the factory premises. Around 10 of these (in combination) appear to be critical for transforming manufacturing into a cohesive smart factory utilizing real-time data for production decision-making, using robots to assist in floor operations, vertical and horizontal systems integration, simulations to test and optimize machines in plants, and additive manufacturing – all these aimed at higher productivity, speed, and precision leading to better competitiveness and profitability. The numerous applications that have evolved out of the many combinations in using the technology enablers are really what is driving Industry 4.0 and extended into Services 4.0.



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Industry 2.0 is characterized as assembly, mass production for more or less homogeneous consumers. New technology (e.g., 3-D printing) moves towards mass customization for specific consumers in terms of what they want, how they want, and when they want. In the past this meant firms had to be large to acquire economies of scale and a factory of sufficient size for line assembly. These required massive investments requiring massive volumes of production with costs amortized over a long period of time. Instead of mass production Industry 4.0 may see batch production. Inventories may be out-of-style as the Internet-of-Things and supply chain synchronization optimize production. There are already consumer products which have moved towards customization such as footwear which can be manufactured "in-store" custom-built in size, style, and design for a specific customer in a short period of time (e.g., 60 minutes) i.e., "while-you-wait" unlike being part of a line assembly. Even products which have long been the staple of the manufacturing sector in industry are being encroached by technology-driven changes in materials and processes. Motor vehicle production, manufacturing's weather vane for assembly-line, is being eroded by 3-D metal printing, lighter materials, and mechanical robots (moving into AI-robots). Since it branches out to numerous other industries and services' including motor vehicle parts the Philippines is exporting, these of necessity will be affected when manufacturing re-boots. As motor vehicle manufacturing becomes more technology-enabled, the magnitude of the electronics products they will require further escalate and displace those mechanical parts the country has comparative advantages into controlling and related other software needed.

As the services industries embrace all of the enabling technologies, significant transformation ultimately takes place. Services considered to be widely personal may become even more automated displacing substantial employment. Services trade has considerably expanded (in some Asian economies at faster clip than goods trade) and it goes without saying that patterns may change and reliance on specific sources such as BPO and computer and communication services may be threatened arising from the applications of technology enablers.

The dominant part of services exports, for many developing countries, is the delivery of business services in part due to advances in telecommunications with their declining costs and obviously the lower labor costs giving them advantage in this type of services trade. These business services have been

outsourced for some time. Services 4.0 directly threaten the core foundation of these types of services exports. As machine costs go down and other technology enablers are able to mimic predictable human behavior some of these business services exports begin to lose advantages.

Despite the assertion that policy and regulatory interventions ought to be neutral in intent, the PEDP 2015-17 strategies identified key export sectors and emerging export sectors as focused products and services to be given sets of packages of support – 13 products and services groups (which actually spawns more than this number). The government's new industrial policy, *Inclusive, Innovation Industrial Strategy (I<sup>3</sup>S)*, focuses on 12 sub-sectors, using their individual road maps, as foundation for industrial development and realizing exports potentials. On the other hand, for PEDP 2018-22 it is suggested to focus on fewer number of products and services groups – 3 of them (which actually spawns more than this number) which are part of the I<sup>3</sup>S. More explicit criteria are advanced for the selection of these few products and services groups as focus for strategy and intervention. There are many other reasons to focus on selected products and services for support aside from the ones suggested in PEDP 2018-22 – distortions in their value chain, potential externalities that cannot be realized without support, market problems, among others. It is critical to be aware that such selection does not exhaust practically all products and services (in which case all are priorities and markets in the end decide values and rankings) and, more importantly, does not inordinately claim the limited resources for support. This is why it makes sense to be neutral in support and at the same time incrementally focus on few products and services groups.

There are no clear reasons for abandoning any of the strategies in PEDP 2015-17 and it would be equally appropriate to take them into PEDP 2018-22 with greater sense of being fully grounded given their progress. It would be useful then to start with these strategies and consolidate them into more effective groups of strategies. In addition would be the implied strategies that come from the FGD in preparation for the Plan. The bases for consolidation of strategies are the seeming common goal among them, the reinforcement effects if they are taken together, and a clearer outcome. Three strategies would emerge from this consolidation: (1) *Improve the Overall Climate for Export Development*; (2) *Exploit Existing and Prospective Opportunities from Trading Arrangements*; and (3) *Design Comprehensive Packages of Support for Selected Products and Services Sectors*.

(1) Improve the overall climate for export development – These include five which were flagged down in PEDP 2015-17 i.e., removing unnecessary regulatory impediments, raising productivity and competitiveness of Philippine enterprises, upgrading exports quality and standards, improving access to trade finance, and enhancing export sectors' innovative capacities. There are other factors, even more crucial, that influence the overall climate. Movements of the real exchange rates and real interest rates are of special concerns to exporters along with other macroeconomic variables e.g., foreign direct investments flows, inflation rates, and public investments. Often these have stronger effects on exports than the factors that directly impinge on them. Indeed "correct" macroeconomic policies may even be more effective than any direct intervention from both public and private sectors. And these tend to cut both ways. For instance, maintaining a market-oriented exchange rate tends to uniformly encourage exports, naturally protect and promote domestic-import-substituting industries, reduce trade deficits, and accumulate international reserves.

2) Exploit existing and prospective opportunities from trading arrangements – The number of existing and prospective bilateral, regional, and multilateral trading agreements the country can use to access markets seem to be growing. In the region the AEC and APEC are ripe with trade options. Bilaterally, the EFTA-PH FTA, looming EU-PH FTA, ASEAN-based bilateral trade pacts and others in the pipeline can be tapped for specific products market access. The usual special and differential treatment in multilateral trade (e.g., GSP-Plus) continues to be beneficial to the Philippines. This strategy is self-explanatory but how it is organized in order to optimize exports growth may have to be examined more carefully so that products and services are the departure points irrespective of the modality or geographic identity. The apparent successes of the DTI program on Doing Business with FTA is illustrative of how trading arrangements can be exploited which is viewed by traders, exporters, and other businesses as access points to specific markets. A dedicated program such as this can be an effective vehicle for both advocacy and promotion.

(3) Design comprehensive packages of support for selected products and services sectors – Part II.4 explains the underlying reasons for focusing export targets and the selection of 3 exports products and services as focal 3 (electronics, processed food, vegetables, and beverages, and information technology and

tourism-related services). The more essential issue is whether there is a rationale for designing a separate support package for these 3 as a focal strategy as well. After all, these 3 are already covered in the identified sources for achieving 2022 exports targets and thus are part of the first 2 strategies elaborated above. Apart from aiming for these 3 together with the rest of the exports products and services, they could very well drive the achievement of overall exports beyond the targets set for the end-plan period. In other words, what incremental strategies warrant for these 3 focus exports targets?

Across the 3 exports targets and given emerging challenges in increasing Philippine market shares partly due to disruptions from Industry and Services 4.0, these would need continuous products and services road map updates derived from deliberate and careful analysis at more disaggregated groups. A pro-active design of such comprehensive packages for focus exports targets is needed. The ultimate goal is to place these exports targets ahead of the curve as Industry and Services 4.0 takes a firmer hold on the patterns of trade along with their underlying investments and technologies.

An agenda to rev up the country for Industry and Services 4.0 suggests special attention to them. For example, it is necessary to build up a robust atmosphere for “start-ups” as a way to encourage innovations in industry and services noting that countries with favorable conditions for them attract many bold entrepreneurs; to promote, if not actually institute incentives, for venture capital and investments into risky but promising initiatives while fully aware of the high rate of failure in many of them; to bring to bear on many of the enablers and their applications the appropriate regulatory framework to ensure that consumer safety and protection will always be of primordial government responsibility without necessarily stifling the applications. Indeed it would probably make sense to launch an advocacy program to gear up for Industry and Services 4.0.

In anticipation of PEDP 2018-22, MC 27 was issued on October 6, 2017 directing concerned government agencies to “...collectively work, review, institute reforms, and implement all relevant policies in harmony with the PEDP and the Philippine Development Plan to boost export growth...” This new MC significantly differs from the previous MC 91 in many respects. MC 27 now explicitly connects PEDP with PDP further supporting their closer synchronization and strengthening time frames and targets. Both MC 91 and MC 27 identify the concerned

government agencies involved in PEDP but leave it to the EDC to oversee the implementation. This means the agencies MC 27 directs to be part of the PEDP need to be organized in ways that would effectively apply the strategies enumerated here to achieve the targets set in PEDP 2018-22. Where there are roles for the private sector, technical and research institutions, and academe, they will likewise need to be embedded in how the various actors in the strategies are to be organized. Since the EDC (under RA 7844) includes representatives from the private sector as members of the Council, any organization for PEDP strategy implementation can be readily arranged.

There are several useful enhancements to the PEDP 2018-22 for consideration. One is to use some of the analytical results of PEDP 2015-17 in order to strengthen the results that the exports targets are achievable. The measures of comparative advantage for specific products would put greater confidence on the sources for achieving the targets. It is also possible to generate estimates of employment and job creation for those products identified as sources for reaching the exports targets, aggregating them and extrapolating impacts on the labor force.

A second area of enhancement is to develop a systematic monitoring and evaluation system for PEDP 2018-22 and subsequent PEDPs. Such a system will need to have measures of inputs and outputs principally and then subsequently on their impacts. While it seems straightforward to follow the progress of exports (and their distance from the targets set) through the regular statistical reports (e.g., PSA quarterly reports of exports) measuring inputs would face many challenges. On the one hand the definition and measurement of inputs have to be sorted out which may or may not lead to some solution. On the other hand to the extent that inputs can be considered as "strategies" in the context of PEDP 2018-22 this may require defining a strategy and generating indices of their implementation. The consolidation of several strategies into some collective groups – defined for example as 3 strategies in Part IV.2 – would make monitoring more tractable. Again this route is equally challenging but may have better prospect given the last enhancement (below).

Finally, a more pro-active EDC – taking off from MC 27 – where it can organize its directed membership into "strategy groups" would clearly be a visible means to monitor. Targets set for these groups feed into the monitoring system.



Ascribing attribution of exports progress (from targets) to either “strategy groups” or other inputs would be the optimal challenge for PEDP 2018-22.

**List of Acronyms**

AHEEER	ASEAN Harmonized Electrical and Electronic Equipment Regulation
AI	Artificial Intelligence
ASEAN	Association of South East Asian Nation
BIR	Bureau of Internal Revenue
BOC	Bureau of Customs
BSP	Bangko Sentral ng Pilipinas
CAGR	Compound Annual Growth Rate
CAO	Customs Administrative Order
DA	Department of Agriculture
DBCC	Development Budget Coordinating Committee
DENR	Department of Environment and Natural Resources
DILG	Department of Interior and Local Government
DOF	Department of Finance
DOH	Department of Health
DOST	Department of Science and Technology
DOT	Department of Tourism
DOTC	Department of Transportation and Communications
DPWH	Department of Public Works and Highways
DTI	Department of Trade and Industry
EDA	Export Development Act
EDC	Export Development Council
EFTA	European Free Trade Agreement





FabLab	Fabrication Laboratory
FDA	Food and Drug Administration
FGD	Focus Group Discussion
FTA	Free Trade Agreement
FTEB	Fair Trade Enforcement Bureau
IDM	Integrated Device Manufacturer
IT - BPO	Information Technology – Business Process Outsourcing
ITC	International Trade Center
LGUs	Local Government Units
MC	Memorandum Circular
MTPDP	Medium-Term Philippine Development Plan
NCC	National Competitiveness Council
NEDA	National Economic and Development Authority
OF	Overseas Filipino
PEDP	Philippine Export Development Plan
PNP	Philippine National Police
RA	Republic Act
RCEP	Regional Comprehensive Economic Partnership
RO-RO	Roll-On-Roll-Off
SME	Small Medium Enterprise
TERMS	Trade-Enabling Risk Management System
TIEZA	Tourism Infrastructure and Enterprise Zone Authority
YOY	Year-on-year

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## I. Context: Review of Implementation of PEDP 2015-17

The PEDP 2015-17 comprehensively analyzed the structure and performance of Philippine exports of goods and services utilizing various means of determining their comparative advantages and competitiveness. On the basis of these analytical assessments several detailed strategies were drawn up towards the realization of the export targets. Subsequently the President issued Memorandum Circular (MC) 91 on February 4, 2016 approving the Plan and directing 14 government agencies to collectively work in facilitating the targeted exports. Although the approval of the PEDP and directive for its implementation may have been delayed, it bears pointing out that many, if not all of the agencies directed by the MC, have individually and collectively contributed to ensuring that exports of goods and services were supported. In the context of formulating a succeeding PEDP a review of the actual progress of PEDP 2015-17 is essential. This review is first carried out by comparing the overall export performance during the period 2014-17 with the targets set out in the previous plan and examining the underlying reasons for their differences if any. The intention is to undertake the review in the aggregates rather than the specific sectors or products involved. The progress of the implementation is reviewed next by summarizing some of the important strategies, programs, and projects of government agencies tasked to support PEDP 2015-17. These are referenced to the set of strategies laid out in the previous PEDP. The increasing importance of "balancing trade" is briefly discussed. Finally the contents of PEDP 2018-22 are broadly described consolidating 3 important parts in the context – the overall environment for international commerce in the medium-term and how it might shape Philippine exports; the scale of strategies to consider based on their reviews; and a preview of how PEDP 2018-22 will play out in the remainder of this plan.

### I.1 Comparative Exports: Actual versus Planned (Target)

Since the enactment of RA 7844 or the Export Development Act mandating the preparation of a 3-year rolling export development plan, it has been possible to track the achievement of the export targets embodied in these plans. In a review of the various plans since 2001, the PEDP 2015-17 tracked how close or how far have the actual exports been from the targets set out in the plans. For the goods exports, only in 2 periods did the actual goods exports meet or exceeded their targets – in 2005-2007 and in 2014 – and for services exports only in 2 (different) periods as well – in 2008 and in 2011-2013

– which have not been the same. Thus out of the 10-year sample of the plans, 4 of these were achieved. Various causes are advanced to explain the poor performance of both goods and services exports, from the country being a small player in international markets to declines in imports from big markets (e.g., US and Japan) to specific product variations (e.g. electronics) and policy-related barriers (e.g. stricter border security).

A comparison between actual and planned exports is useful for at least 2 reasons. The first is that it provides clues for the disparities in exports and allows alternative hypotheses to be systematically analyzed if not empirically validated. This is what has been done in the review in PEDP 2015-17. The second, and more critical, reason is that the magnitudes of the difference between actual and planned exports reflect the country's ability to scale up export targets and store revenues as cushion to unexpected shocks in succeeding plan periods. For example, where actual exports far exceed target exports, a succeeding plan can realistically have a higher base value relative to the situation where the margin of target achievement is small and thus succeeding target lower. On the other hand in times where actual exports far exceed target exports these cumulatively strengthen their structural base and ensure a sustainable path to be "...transformed into an exporting nation..." as espoused in the RA 7844's declaration of policy.

Looking at the period 2014-2017 the track record is similar to that of the previous review for the PEDP 2015-17 which is uneven though actual are much closer to targets. Table I.1 and Figure I.1 show the comparisons during the period of the last PEDP for goods, services, and total exports.

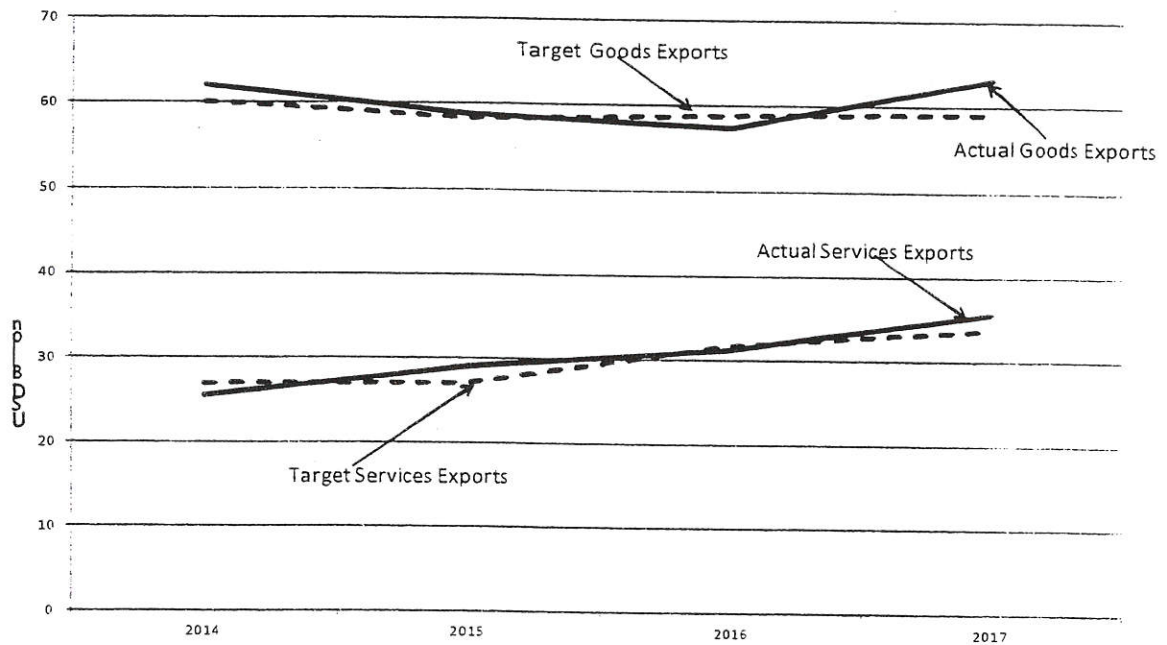
**Table I.1 Actual versus Target Export Revenues<sup>a</sup>, 2014-2017**

	2014		2015		2016		2017	
	Actual	Target	Actual	Target	Actual	Target	Actual	Target
In billion US dollars								
Total Exports	87.60	86.94	87.90	85.37	88.61	89.22	98.84	92.15
Goods	62.10	60.10	58.83	58.28	57.41	58.83	63.23	59.13
Services	25.50	26.84	29.07	27.09	31.20	31.69	35.61	33.70
Year-on-year (YOY) Growth								
Total Exports	8.6	8	0.34	(1.8)	0.8	4.5	11.5	3.2
Goods	9.5	6	(5.3)	(3)	(2.4)	0.9	10.1 <sup>a</sup>	0.5
Services	6.4	15	14.0	0.93	7.3	16.9	14.1	6.3

Note: YoY growth targets for 2014 were based on DBCC's projection.

<sup>a</sup>The target values average the high and low targets in PEDP 2015-17

Figure I.1 Actual Versus Target Export Revenues for Goods and Services, 2014-2017



Source: Table I.1

What is evident from the data is that goods exports met or exceeded their targets for 2014 and 2015 while services exports met or exceeded their targets in 2015 and 2016. Moreover for 2017 the preliminary data indicate they may exceed targets.

Comparing the longer near-term historical period and the recent PEDP 2015-17 elicit 2 observations. First, what is common between the longer-term review and the recent 2014-17 data is the uneven pattern of exports growth with some years where actual exports met or exceeded targets and in some years falling below targets and never a cumulative round of either. Second, the margins where actual exports met or exceeded targets have been insignificant in those uneven periods –in 2015 (see Table I.1 above) actual services exports exceed targets by more than 7%. But actual goods exports only marginally exceeded targets by less than 1%. This is replicated in 2017 after decline in 2016.

What these observations imply is that comparing actual Philippine exports with their targets lend credence to the various explanations advanced for their poor showing over the years. But their uneven performance reveals inherent weaknesses in inching up the export ladder if not accelerating in

reaching higher revenues. In times when actual exports exceeded targets these were often insignificant to provide a more solid base for higher targets in succeeding plan cycles. Conversely, their small margins above targets could not achieve a momentum for a real structural change in export behavior and outputs. In short, the country failed to accumulate exports and transformation during those times which also would cushion during times when actual exports fall short of targets.

Put in another way, annual growth rates of merchandise exports that are sustained over a long period not only give countries sufficient revenues and automatic protection during downturns but also stronger bases for raising further exports targets. This behavior appears to have been evident among the Asian tigers and other newly industrializing economies. With the exception of the Philippines, many of the Asia region's exporting economies initially accelerated their exports and managed to either keep them growing at double-digit rates or within a 10% annual rate. The initial spurt of export growth by the Philippines petered out to single-digit below 5% and prevented a more aggressive targeting in the country's development plans.

Accompanying export targets were strategies, policies and programs meant to support the thrust principally by government actions and interventions. PEDP 2015-17 is no exception where 8 specific strategies were identified. Thus while exports derive from market transactions their underlying behavior may have been influenced by broad or specific policy and regulatory interventions. How pervasive these have been during the planning period needs to be reviewed apart from the numerical comparisons above though it would be difficult to ascribe the actual exports (or lack thereof) to these interventions.

## *1.2 Strategy Implementation*

The 8 strategies adopted to carry out PEDP 2015-17 through MC 91 included (1) design comprehensive packages of support for selected sectors, (2) remove unnecessary regulatory impediments to goods movement and services delivery, (3) raise productivity and competitiveness of Philippine enterprises, (4) upgrade exports quality and standards, (5) improve exporters' access to trade finance, (6) exploit opportunities from regional and preferential trading arrangements to expand market access, explore new trading partners, and develop new export products, (7) launch well-coordinated and sufficiently-funded exports and investment promotion campaign, and (8) enhance export



sectors' innovative capacity through an efficient system of national innovation. The progress in implementation of these strategies in support of PEDP 2015-17 is briefly summarized:

1. *Design comprehensive packages of support for selected sectors* – Although PEDP 2015-17 identified 6 key export sectors and 4 emerging exports to be provided with such support packages, the actual interventions by a number of government agencies were more neutral relying more on opportunities. DTI's package for example included business matching (assistance to more than 3,500 exporters, 19 trade fairs) and training and capacity building. DA conducted value-chain analysis for 47 commodities and encouraged private sector participation in 18 international trade fairs. DOST developed 22 food processing equipment for the regions, while DENR launched a national greening program aimed at re-generating raw materials for exports (e.g., wood and agro-forestry products, timber plantations);

2. *Remove unnecessary regulatory impediments to goods movement and services delivery* – For the DA's scope of export products, it simplified and automated SPS export clearance and developed export certification system under an overall Trade-Enabling Risk Management System (TERMS); FDA in the DOH implemented its electronic registration of products such as medium and high risk pre-packaged food products and its electronic license to operate for all completed streamlined requirements for health products under its regulations; Philippine National Police in DILG reduced the list of regulated chemicals from 101 to 32 (likewise removing police escorts for movement of low-risk chemical) and simplified procedures for licenses and permits; the BIR reduced by half the number of steps required for primary and secondary registration and re-designed 10 forms with reduced number of fields; and the BOC established an Advanced Ruling System for valuation and rules of origin through a Customs Administrative Order;

3. *Raise productivity and competitiveness of Philippine enterprises* – This involved the provision of new technologies accessible by enterprises, construction, rehabilitation, or upgrading of physical infrastructure, and greater flexibility of wage determination. DOST assisted more than 7,000 firms acquire technologies and deployed 21 laboratories for one-stop services; DPWH built new roads, by-passes, access roads to seaports and airports – for example, more than 700 kilometers of roads were built to de-congest traffic in urban areas, 170 and 300 kilometers of access roads were built leading to 19 different airports and 43 different seaports, respectively; DOLE provided

technical assistance to some 800 MSME's on more flexible tiered-wage system; DOT is complementing DPWH in access to basic infrastructure services; Executive Orders 170 and 204 pertaining to the installation of a Roll-On-Roll-Off (RO-RO) Terminal System as critical infrastructure for an archipelagic economy such as the Philippines increasing connectivity across the islands expanded the coverage beyond self-powered vehicles to include containers on chassis loaded by prime-mover on RO-RO (CHA-RO) and on private ports aside from government operated ports; RA 19668 (Foreign Vessel Co-Loading Act) further supports better, more efficient, and cost-effective logistics;

4. *Upgrade exports quality and standards* – While safety and protection are well understood and accepted by exporters, going beyond these measures towards quality and standards have yet to diffuse broadly. Efforts to rationalize the fragmentation of government regulatory agencies (and some private sector) involved in standards development, calibration, testing, inspection, certification, and accreditation have started along with specific sector initiatives (e.g., ASEAN Harmonized Electrical and Electronic Equipment Regulation [AHEEER]) as part of regional efforts to arrive at common standards and regulation. DTI's new bureau, the Fair Trade Enforcement Bureau, assumes not only its traditional responsibility of consumer protection but has also the leadership in national quality infrastructure. Towards this end it drafted the legislative bill National Quality Policy and NQI Framework and its subsequent revisions. Together with the National Competitiveness Council, an inter-agency NQI-Working Group was convened to shepherd the proposed bill through it. DA is setting up the DA Food Safety Institute while aligning its BAFS as part of the broader rationalization of national standards; DOST's Die and Mold Solution Center has implemented 9 projects;

5. *Improve exporters' access to finance* – Despite the many credit and financing windows and facilities for trade and exports, particularly non-bankable borrowers and MSMEs, yet in many cases accessibility to these windows ends up being treated like any other transaction i.e., as commercial rather than developmental, as an assured return rather than high potential. Neither is whole suite of support usually provided along with access such as export credit insurance, buyers/bank risk assessment, pre-shipment and post-shipment credit, and export insurance, among others. In part, this is due to institutional constraints in the way these windows were created – from a non-developmental client perspective to lax enforcement of mandated loan allocation. The FGD in preparation for PEDP 2018-22 revealed these by exporters who accessed these facilities. In 2015-17 changes took place to

address inherent weaknesses. DTI pushed for the amendment to the Magna Carta for SMEs (RA 9501) through a legislative bill, instituted 8 new financing facilities for SB Corporation, and a PHP 1 B fund under P3 (Pondo sa Pagbabago at Pagasenso); BSP expanded the credit surety fund, enhanced its financial literacy program in the export sector, and liberalized FX rules on foreign currency lending;

6. *Exploit opportunities from regional and preferential trading arrangements to expand market access, explore new trading partners, and develop new export products* – In completed FTA (e.g. EFTA-PH FTA in 2016) and in current bilateral and regional FTA negotiations (e.g., RCEP, ASEAN-HKG FTA), PH-EU FTA) the key and emerging export products in PEDP 2015-17 have been included in the agendas; DTI's Doing Business in FTA has continued to expand in terms of sessions across the country (270 sessions), companies assisted (10,395), and participants (32,003);

7. *Launch well-coordinated and sufficiently-funded exports and investment promotion campaign* – 3 flagship agencies in trade have independently pursued promotion and advocacy campaigns: DA agri-business investments campaigns in Europe and the Middle East, DOT in tourism promotion campaigns and DTI in developing a comprehensive investment and export promotion development plan. Across other agencies of government have been initiatives that collectively contribute to this particular strategy. For example, DILG support to LGUs in promoting local products for potential exports and identifying resources investments can exploit. In relation to this is DOT's tourism investments promotion program in TIEZA projects. DOF's rationalization of incentives (investments and exports) may result in strengthened and more efficient programs;

8. *Enhance export sectors' innovative capacity through an efficient system of national innovation* – A strong network of public and private institutions involving industries, universities, and research entities collectively engendering creativity and innovation is a hallmark of many export powerhouses. They translate into products and services which earn customers and effectively compete in world markets. But creativity and innovation need to be matched by bold entrepreneurs who diffuse these products into markets. In the former DTI and DOST have led in supporting the evolution of creativity and innovation – OBO innovation hub, food connection, and FabLab, and DOST through 9 existing and 3 newly-approved technology business incubators, 18 regional food innovation centers, 3 electronics products development centers,

and automotive testing facilities. Entrepreneurship, however, may not easily emerge or develop from classroom and more academic setting but from constant challenges imposed through exposure in international markets, sustained openness, and innate drive. It is not easy to create such a setting – however a more conducive atmosphere for creativity and innovation (for which there are concrete measures) along with greater liberalization may see an increasing cadre of creative and innovative products and services.

### 1.3 *Balancing Trade*

The PEDP is primarily aimed at increasing exports with its underlying strategies meant to underpin that drive. But it cannot ignore that imports would increase as well – more so in today's trade where exports require imports in the form of raw materials, intermediate goods, and capital equipment. The ultimate drive therefore is to ensure increasing value added from exports net of necessary imports if not using more domestic-sourced inputs and achieve a better trade balance.

Philippine trade balance has historically been negative i.e., imports exceeding exports, wherein more than three-fourths of both are accounted for by 10 trading partners. This is a reflection of the degree of trade concentration. In 2017, 7 of the top 10 export destinations were also the same import sources. But in 4 export destinations exports were less than 50% of imports from the same destinations. Whether it would be useful to actually target a trade balance for these destinations through deliberate programs to boost exports or reduce imports depends on a number of trade factors.

Despite a consistent negative trade balance, the country's Balance of Payments (BOP) on current account has always been positive owing to the large inflows in the transfer item constituting mostly Overseas Filipino remittances. This has resulted in a sustained accumulation of foreign exchange reserves. In a sense the current account balance masks underlying imbalances in trade which in turn may reflect lack of competitiveness of Philippine exports. Between 2005 and 2015 the country's balance on current account has been positive and only in 2016 and 2017 did it become negative.

Adding services into the goods trade balance (as it should given the expanding services) to arrive at goods and services balance eases the burden on the BOP. While IT-BPO is the largest component of services exports, tourism services (transport and travel) come next in exports.

The enormous networks of firms, traders, producers, and consumers along international supply chains make it difficult to target specific products for export increases and import decreases. Moreover, given the ever-changing flow of trade across countries, it is certain that there would be lags in the achievement, if ever, of targets to ensure better trade balances. What products to focus on in order to improve trade balances are likewise uncertain to succeed over a longer time period.

It is also difficult to consider a bilateral approach to improving trade balances. It would involve identifying specific products from among numerous that are traded, reducing them based on more stable and consistent changes, and determining their certainty in the near-term when measures are put in place. On the other hand, identifying specific imports would be plagued with the same problems as in exports. And to the extent that substantial bilateral trade is intra-industry trade, product identification becomes more challenging and may regularly fluctuate over time.

These issues however should not diminish the growing importance of “re-balancing” trade given the long-period of negative trade balances, the challenges of new developments in industry and services on trade (discussed below), and of weaning away from inordinate reliance on remittances to accumulate reserves in the current account of the Balance of Payments. Indeed the magnitude of negative trade balance in 2016 and 2017 that could not be covered by (continuous) increases in transfers exposes a lingering problem and highlights a “wake-up” call to address the broader trade balance issue.

Any approach to balancing trade has to be carefully built. In the light of PEDP 2018-22 a two-pronged simultaneous approach seems to be appropriate. The first is to give priority to improving the overall climate for exports that address macroeconomic concerns. For example, more competitive real effective exchange rates (direct and cross-currency rates) not only tend to increase exports but also naturally protect domestic industries including those import-competing. When combined with accommodating real interest rates, accessibility to supportive financial windows, and price stability i.e., credible monetary and fiscal policies which are the hallmarks of macroeconomic regimes, favorable trade balances may occur. Protection from imports through tariff and non-tariff restrictions tends to distort inter-industry linkages and overvalue exchange rates.

Along with the above would be a second prong. This is to actually increase public and private advocacy, domestically and internationally, on encouraging alternative imports sources and products that are essential to domestic consumption and export production. For example among all regions the Philippines traded with (December 2017), it is with East Asia where it experienced the largest trade deficit (and within the region China, South Korea, and Taiwan) followed by ASEAN (and within it Indonesia and Thailand). Trade officials posted in these areas could be tasked to drum up exports and trade officials and the private sector could be tasked to encourage alternative imports sources or domestically sourced import-substitutes.

Far superior to these trade-balancing approaches is the greater goal of achieving exports targets through strategies that simultaneously influence imports and gain overall balance. In other words, increasing exports and decreasing imports need to be achieved through a comprehensive policy arsenal and program initiatives. These are detailed in the PEDP 2018-22.

#### *1.4 Summary and 2015-17 International Environment*

Actual total exports in PEDP 2015-17 exceeded their target in 2015. In the next year they fell below target. It seems that 2017 may show a similar excess over target based on initial data. By composition services exports exceeded their targets in all 3 years; these were not sufficiently large to attain a 2-year streak. Indeed the shortfall in 2016 was 3 times larger than the surplus in 2015.

The empirical results of comparisons between actual and target exports in PEDP 2015-17 are comparable to the results in PEDP 2012-14 i.e. some fluctuation in actual total exports and their targets. Although examining their compositions to detect product performances may be useful, it does not really matter significantly at the level of these aggregate results.

When the actual strategies are examined, some of which are briefly indicated above, there have been many measures and interventions that were set in motion during PEDP 2015-17. However how effective these have been in contributing to the attainment of the target exports in the same period depends not just on these but of the overall underlying international environment. The brief summary of strategy implementation elicits a number of observations. One is that some interventions and measures were either too

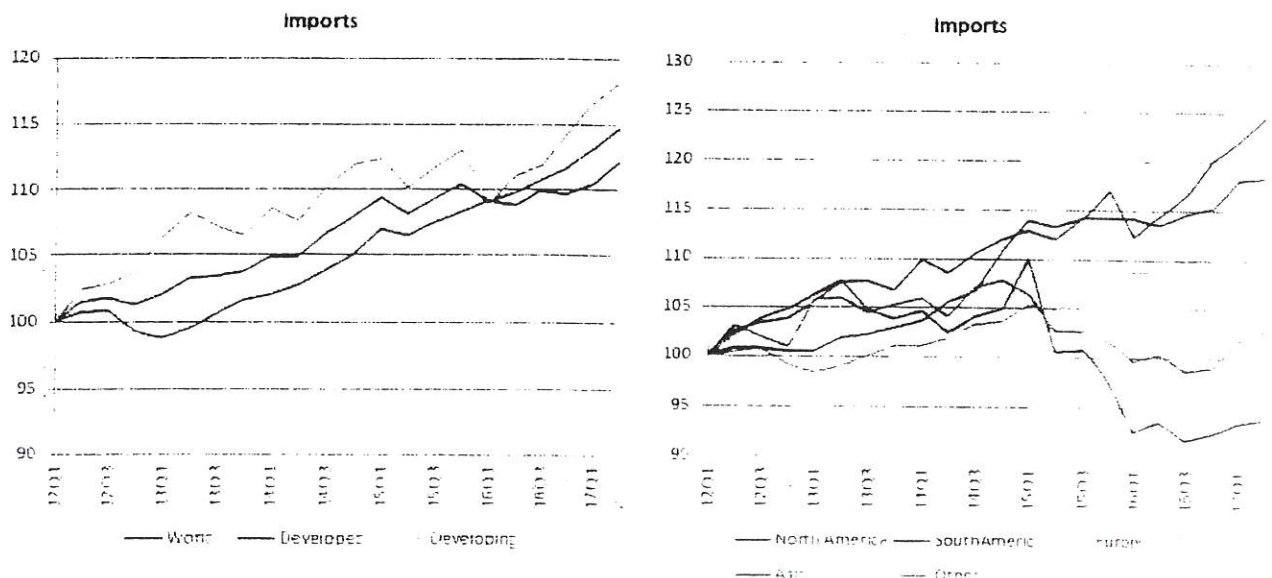


early in delivery to have their desired impacts or yet to be actually implemented (e.g. those meant to raise productivity and competitiveness remained to be developed or completed during the period). Another is that a measure or intervention for example would be a necessary condition but not sufficient such as the strategy to enhance innovation in the export sector. Finally, some of the measures and interventions under a strategy need to be coordinated more closely and set in package in order to achieve their joint positive effects beyond an individual measure's effects assuming they have been simultaneously implemented.

Against these desirable and laudable directions in terms of export performance and strategy implementation are the external conditions in the international market place of Philippine exports. Apparently the global and major markets of the Philippines attained their peak growth in 2014 after which in the next 2 years (2015 and 2016) declines were pronounced. While world GDP growth fell in 2015, the fall in the US, EU and China (which are some of the Philippines' major markets) was more precipitous. On the other hand, a 2017 was considered a fragile recovery both globally and in the individual markets of interest to the Philippines.

Figure I.1 below shows the import volume index (which is the market for Philippine exports) between the first quarter of 2012 and the first quarter of 2017. The volume trend of imports indicates the slowdown in 2016 (first quarter) globally and by regions. While the global downturn seems perceptible but not dramatic, the breakdown by regions is quite prominent e.g. North America, Asia, and South America, the overall slowdown is evident. More pointedly, the uptick in the volume of imports can be seen during the last part of 2016 and into the beginning of 2017.

**Figure I.2 World and Regional Imports Volume Index**  
(2012 Q1 = 100)



Source: WTO

All told then, the export performance in 2015 manifested by a slight excess of actual exports to target exports and the positive if not some significant contribution of (partial) strategy implementation in 2015-17 did not seem to be strong enough to parry the negative effects from slowdown in world markets especially from markets of importance to the country. Indeed all other exporting countries particularly in Asia, which have been relying on exports to propel their growth, suffered declines in export earnings. One of the differences between Philippine exports 2015-17 and the other Asian countries is that the latter have gained significant surpluses from their peaks cushioning their impacts and at the same time keeping their export basis with large earnings. Many in fact experienced sharp declines in 2015 but decelerated in 2016 consistent with global trends. With an expected recovery in 2017, there may be rebounds across Asia as complete data come in. Table I.2 reports these exports from a number of Asian economies in 2014-16. With the exception of Viet Nam these economies saw their merchandise exports fall drastically in 2015 but flattened out in 2016. The magnitude of the fall varies but set them back by 3-7 years (the last column indicates the year of the lowest export values)

**Table I.2 Merchandise Exports 2014 – 2016 Selected Asian Economies**  
(in USD B and annual growth rates)

	2014	2015	2016	*
PRC	2,342.0	2,273.0 2.9	2,098.0 7.6	'12
Hong Kong	473.6	465.1 1.8	462.2 0.6	'13
S. Korea	572.7	526.7 8.0	495.4 5.9	'11
Taipei	318.9	283.5 11.0	279.5 1.4	'10
Indonesia	176.0	150.4 14.5	144.5 3.9	'09
Malaysia	233.9	199.0 14.9	189.5 4.8	'09
Philippines	62.1	58.6 5.6	56.3 3.9	'12
Singapore	415.2	357.7 13.8	338.0 5.5	'09
Thailand	226.7	214.1	214.0 0.0	'11



		5.6		
Viet Nam	150.2	162.0	176.6	9.0
		7.8		

Source: ADB Key Indicators 2017

\*Year reached

What the table suggests is that Philippine export performance in 2014-16 was similarly experienced across most of the Asian economies – some worse than others. 2016 declines slowed down but the impact has been a setback for exports by several years. The big difference seems to be the capacity of the other economies to better weather given that these have built up their export structures arising from their continuous expansion even accelerating growth. The Philippines did not have that opportunity in the last 5 or so decades.

### 1.5 The PEDP 2018-22 Plan

The formulation of PEDP 2018-22 is presented in the succeeding parts. Part II lays out PDP 2017-2022 as the background for the PEDP 2018-2022 export targets. The PDP is briefly summarized concentrating on Chapters 9 and 15 as take-off for examining the feasibility of meeting the targets indicated in Chapter 15. Firstly, the examination consists of determining the required annual growth rates of goods and services exports in order to meet the targets, reviewing recent historical growth rates of exports to see if they meet the required rates to achieve the targets. Second, sources for the exports that would meet the targets are specified and detailed according to goods and services exports. Third, an updated trade map is included as a test if there is confidence in the feasibility of meeting the targets. Fourth, a focus on 3 exports targets is identified and given supporting reasons. Finally, a yearly breakdown of the Plan is presented.

Part III explores the issue of planning for Industry and Services 4.0. Since PEDP 2018-22 is synchronized with the 6-year PDP and both being integral to attaining a long-term vision for the Philippines in *Ambisyon 2040*, developments that appear in the horizon that may influence trade in the medium-term (between 2017 and 2022) cannot be ignored. This is the thrust of this part. The enablers of Industry and Services 4.0 are enumerated and briefly described. Illustrations of Industry 4.0 and Services 4.0 are then given. Finally, what would constitute gearing up for Industry and Services 4.0 is explained.

In Part IV, the strategies identified in PEDP 2015-17 are enumerated and then proposed to be consolidated into fewer “group strategies” consolidating those with substantial interaction following a simplified framework. The exercise leads to a smaller number of strategies – (a) improve the overall climate for export development, (b) exploit existing and prospective opportunities from trading arrangements, and (c) design comprehensive packages of support for selected products and services sector. After detailing what would contain in these strategies, how these would be carried out is pointed out using the MC 27 as basis. Selected and limited comparative strategies of other exporting economies are attempted to see how the proposed directions fare. Then the strategy implementation is cost out not so much in budgetary terms but the kinds of efforts needed across different agencies.

A summary of challenges and risks consolidated from the previous part constitutes Part V. These include a riskier global trade given the expected recovery and the simultaneous responses by all exporting economies, policy retreats in major markets driven by re-emerging nationalism, constraints to regional and multilateral trading arrangements from drags to unfinished initiatives to new starts, and technological breakthroughs that challenges how goods and services exports may play out over the plan period and beyond

Part VI concludes the Plan by describing the different approaches followed by PEDP 2015-17 and PEDP 2018-22 looking into their similarities and differences and more importantly how these 2 approaches complement each other. Some possible enhancements to PEDP 2018-22 end the conclusion.

## II. PDP 2017-2022 and PEDP 2018-2022 Export Targets

The Philippine Development Plan (previously the Medium-Term Philippine Development Plan) is the country's principal document laying out its social and economic vision, development goals and targets, specifying strategies to achieve them, and the roles of government agencies in the entire processes involved in crafting, implementing and, monitoring it. Every new political administration begins with its own plan during its regime (thus previously named a medium-term document).

The PDP 2017-2022 differs markedly from its predecessors in the sense of recognizing a cumulative importance and interconnection among past (and future) development plans and a far-reaching framework for which succeeding development plans hinge on. *Ambisyon Natin 2040* is the 25-year vision for the Philippines serving as the anchor for the PDP and the succeeding ones. Briefly the country is envisioned to be a prosperous, middle-class society where there is equality of opportunities and poverty eradicated. It is to become a major player in the global knowledge economy producing innovative products and processes used to make high-quality goods and services at competitive prices. The conditions for this envisioned society in *Ambisyon Natin 2040* where the Filipino life is strongly-rooted (*matatag*), comfortable (*maginhawa*), and secure (*panatag*) are detailed for becoming a prosperous, predominantly middle-class society where no one is poor, towards smarter and innovative people, and being a high-trust society.

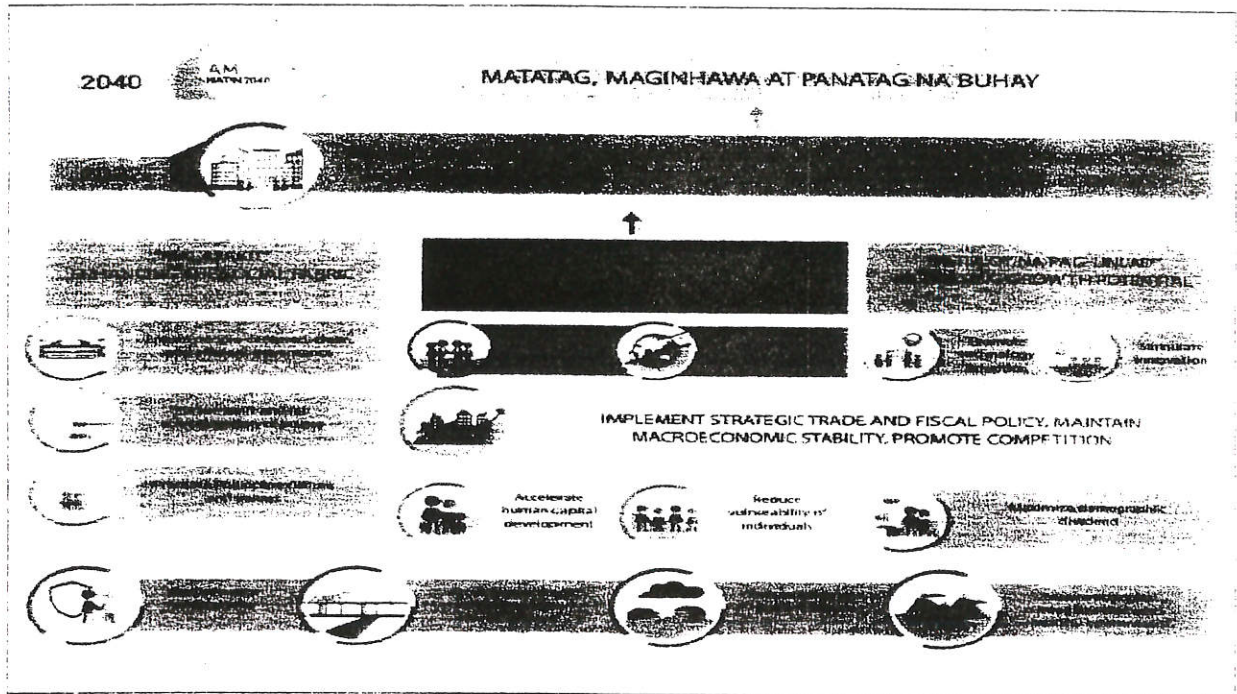
The PDP contains the building blocks, within the medium-term 2017-2022, towards that vision. In pursuit of the country becoming a major player in global knowledge economy, the PDP as a plan provides several mechanism leading into an overall strategic framework (Figure II.1). The objective of the PDP 2017-2022 is "...to lay the foundation for inclusive growth a high-trust and resilient society, and a globally competitive knowledge economy..." which contributes to realizing the vision in *Ambisyon 2040*. In turn, this is carried out, particularly for a globally competitive knowledge economy, through strategic **trade** and fiscal policy, maintaining macroeconomic stability, and promoting competition (emphasis added).



The elements of the trade part of the PDP can be found in at least 2 specific chapters – Chapter 9 focuses on targeting economic opportunities in industry and services sectors (*Trabaho at Negosyo*). Although the substance covers the development of domestic industry and services, many of the issues and projections are relevant to trade in goods and services – the inability of the Philippines to attract more foreign direct investments in comparison with ASEAN neighbors Thailand, Indonesia, Singapore and Malaysia. The broad conditions that constrain the expansion of industry and services equally influence international trade – logistics bottlenecks, laws, regulations, and rules including those imposed by fundamental provisions of the Constitution, costs of doing business, global market uncertainties, and political and security issues, among others, continue to hound both domestic and international commerce.

Chapter 15 deals with creating sound macroeconomic policies that help achieve various forecasts and targets of the PDP. Like Chapter 9 a list of challenges pertain mostly to international conditions – slowdown in global trade, developing protectionism in traditional markets and, volatility of capital flows, among others. When combined with internal constraints some enumerated in Chapter 9, the hurdles that have to be overcome for sound macroeconomic policies would indeed be formidable in the medium and in the long run. The 3 areas constituting macroeconomic conditions – fiscal space, monetary policy, and external trade policy regime – for which strategies are indicated aim at attaining the targets set for the macroeconomic setting. These are defined to be sector outcomes for the macroeconomy for a responsible, strategic and supportive fiscal sector, resilient and inclusive monetary and financial sector, and strategic external trade policy regime.

Figure II.1 Strategic Framework



Source: Philippine Development Plan (2017)

This part examines the export targets expressed in the PDP and their feasibility within the PEDP period of 2018-22. The main difference between PEDP 2015-17 and PEDP 2018-22 is that this PEDP's starting point is the end-period export targets in the aggregate as the objective of the planning activities. Instead of identifying key exports and emerging exports followed in PEDP 2015-17, what is pursued here is to take stock of the actual exports in 2016 – whether key or emerging but also potentially rising – and their likely revenues in 2022. The remaining gap is then further examined in terms of how this may be addressed. Put differently, the export targets in PDP were derived by using the exports 2016 as base and then an average growth rate is assumed to arrive at end-period target. PEDP 2018-22 puts flesh into the targets – first to evaluate their feasibility and, if so, what would compose them in annual terms.

The composition of exports – goods and services – comes from 3 combined sources. One is the planning exercise convened by the EDC in April 2017 at which stakeholders in various export industries gave informed projections of likely exports trends adjusted for their various global assessments. Second is an extension of the exercise but focusing on new Philippine exports and how the

global markets would be in the next 5 years. Finally, an updated trade map classifying goods and services and how consistent these are relative to the other 2 exercises. The remaining gap is further considered in more general terms without specific reference to products but of assessments of international markets.

Accordingly, the next section begins with the exports targets expressed in the PDP. Their feasibility is evaluated on the basis of more recent historical experiences in exports growth. The point in this section is that the PDP targets (the low side) is feasible on the basis of the more recent historical growth of exports. The succeeding section elaborates on the composition of these targeted exports in 2022 from the EDC exercises. A third section gives an updated trade map for goods and services between 2 time periods 2006-13 and 2013-16 showing significant shifts in exports among those classified in PEDP 2015-17. Section 4 proposes more focused targets for PEDP 2018-22 explaining its rationale and their ability to deliver the targets in addition to the composition laid out. Finally, a summary of the annual targets is presented.

*II.1 Exports: Targets and Feasibility*

PDP Chapter 15 sets out the targets for exports at the end of the medium-term planning period 2022 decomposed into goods exports and services exports. Since the full-year 2016 exports were not available during the PDP formulation, the chapter uses the first 9-month exports but annualized and together with the DBCC assumption of export growth, to arrive at the end-period targets. Based on the actual exports in 2016 and the targets in 2022, Table II.1 shows the low and high export targets (by goods and services) for 2022 and the required compounded annual growth rate for these (using BPM6).

**Table II.1 Actual Exports 2016 and Target Exports 2022**

Products	Exports 2016 (US\$B)	Target Exports 2022 (US\$B)		Required CAGR (Percent)	
		Low	High	Low	High
Goods	42.7	61.0	62.2	6.11	6.46
Services	31.3	61.0	68.6	11.78	13.99
<b>Total</b>	<b>74.0</b>	<b>122.0</b>	<b>130.8</b>	<b>8.69</b>	<b>9.96</b>

Sources: PDP (2017), PSA (2017)

Actual exports found in Chapter 15's targets as well as the targets themselves are based on a new BOP manual (BPM6) which has a stricter measure of goods trade, separating out those considered services undertaken by countries that form part of goods transformation thus reducing goods exports and increasing services exports. In the case of Philippine data there is no detailed list of goods traded that follow BPM6. Only at the aggregate level is exports reckoned in the new definition. The BSP also reports on the aggregate values of exports revenues using BPM6. As a result of this adjustment the exports values using BPM6 are significantly less than values using BPM5 which are used for all the disaggregated values. For example the actual exports for 2016 based on BPM5 is US\$ 57.4B which is 34.3% higher than the BPM6 value of US\$ 42.7B i.e. BPM6 values are 74.4% of the BPM5 exports. These are aggregate ratios, are expected to change, and would differ depending on the actual products traded in a given period of time (e.g., some ratios are 83.4%). With respect to services exports the 2016 values under BPM5 and BPM6 have not changed.

Table II.1 shows the actual exports in 2016 which are higher than the Jan-Sept data in the PDP. A lower base would have required a higher annual growth rate to reach the 2022 targets. The actual exports which are higher than the reported values in PDP would require a lower CAGR to reach the targets. The last 2 columns of Table II.1 indicate the required growth rates of the exports in order to reach the high and low targets by 2022. Whether the country's past exports have annually grown by the rates shown in the columns is what needs to be evaluated first. Next would be to determine which past growth rates should be used to project if the exports targets can be met. A final question revolves on what products may compose these exports that meet the targets by the end of the plan period.

The Philippines began significant non-traditional exports in the decade of the 70s and notched annual growth rates of 17.9% but ground to 3% in the next decade before some recovery in the 90s at 16.6%. Compared to the sustained and cumulative exports growth rates among the Asian tigers and the emerging economies of ASEAN, the erratic nature of Philippine exports growth suggest it is difficult to rely on old historical experience. The more recent historical growth rates may be indicative of the feasibility of achieving these rates. Table II.3 reports the historical growth rates of exports based on different periods but basically covering 2006-2016.

**Table II.2 Historical Growth Rates of Exports Goods and Services  
(2000-2016 in percent)**

	2006-12	2012-14	2014-16	2006-16
Goods	7.10	3.64	(7.39)	3.35
Services	10.17	11.69	10.73	10.95
<b>Total</b>	<b>8.13</b>	<b>6.17</b>	<b>(0.88)</b>	<b>5.88</b>

Source: PSA

The 2006-2016 overall track (with an aggregate growth rate) is divided into different sub-periods – 2006-12, 2012-14, and 2014-16 with differing growth rates for total and for the 2 components. As Part I had reported, 2014-16 was a period of sharp global trade declines. On the other hand, the sub-periods 2006-12 and 2012-14 reflect some stability of exports growth peaking in 2014. Thus the sub-period 2006-12 is of sufficient length to cover more stable behavior of exports. This is the growth rate used to assess the feasibility of meeting the end-period targets. Applying the 2006-16 period as the low growth track, and the 2006-12 as the high growth track, to the base period exports yields Table II.3. Total exports, based on historical CAGR for 2006-12 is expected to reach US \$ 122.3 B meeting the low target exports by 2022. The high CAGR of the sub-period 2006-12 results in achieving the low end of the targets for end-period.

**Table II.3 Exports PDP Targets and Projected Exports 2022  
(in US\$ B)**

Products	Target Exports 2022 (US\$B)		Exports Using Historical CAGR (Percent)	
	Low	High	Low	High
			(2006-16)	(2006-12)
Goods	61.0	62.2	52.1	64.5
Services	61.0	68.6	58.3	57.8
<b>Total</b>	<b>122.0</b>	<b>130.8</b>	<b>110.4</b>	<b>122.3</b>

Sources: PDP (2017); see text

## II.2 Exports Sources

PDP is driving PEDP 2018-22 being embedded in its targets under sound macroeconomic policies. There is minimal elbow room in developing independent plans – after all, eventually the preparation of the PEDP need to be synchronized



with the PDP in terms of its medium-term horizon (instead of the usual 3-year rolling plan) and in relation to the larger vision . Towards achieving end-period targets, and having determined that these are feasible given historical CAGRs, the content of these target exports is the next order.

The EDC planning sessions among export stakeholders in April 2017 resulted in the identification of products and product sectors that will characterize the country as "... a competitive, intelligent, and innovation-driven exporting nation..." For the purposes of strategy formulation and organizing interventions to further enable these exports, the EDC classified them according to *Global Market Leaders, Billionaires Club, and Multi-Billionaires Club and Ecozones*. The Global Market Leaders are products and product sectors with the potential to be part of the top 10 players in the global market. Billionaires Club consists of those products and product sectors generating current export revenues of US\$ 600 Million and can generate revenues to at least US\$ 1 Billion. Multi-Billionaires Club and Ecozones are those products and product sectors generating exports of at least US\$ 1 Billion and seen to increase to US\$ 5 Billion at end-period. The same exercise also flagged down, under the same classification for strategy and organization, services exports. The aggregate sum of all these projected exports by end-period constitutes one source of exports in reaching the end-period targets shown in Table II.3. Given the uncertainty of realizing these exports, the total may be cast as a range of export values

Apart from expected generated exports through the EDC stakeholders' sessions, additional goods products were identified from other sources but principally the International Trade Center. These are seen to potentially be important incremental exports given their importance in world markets, the Philippines' share, and their more recent annual growth rates.

A trade map was constructed in PEDP 2015-17 which essentially categorizes Philippine exports of goods and services into 4 groups demarcated by their growth relative to world growth (on the horizontal axis in a quadrant) and constant share in world market (vertical axis in a quadrant). A reference point is where an export product's growth is the same as the world for the same product and keeping its share constant.

Champions are export products and services which demand exceeds world demand and for which Philippine exports are increasing in market shares. These exports are winners in growing markets and are located in the upper right quadrant of the reference point. Among the champions in the trade map covering 2006-2013 are processed food and beverages, banana, coconut oil, centrifugal and refined sugar. Of the 57 product clusters, 28% are champions (17 clusters). For services exports, among the champions are other business services (principally IT-BPM), insurance and pension, and personal, cultural, and recreational services – constituting 58% of total services exports.

Underachievers are export products and services which demand is growing faster than average but for which Philippine exports are losing markets to others. While world markets are growing among these export products the Philippines has been losing shares and are located in the upper left hand quadrant of the reference point. Among the products for which Philippine exports are under-achievers are desiccated coconuts, coffee, mangoes, gold, and natural rubber. Of the 57 product clusters, 4% are underachievers (11 clusters). For services exports, among the under-achievers are computer and information services, and transportation services – constituting 19.6% of total services exports.

Achievers in adversity or winners in declining markets are export products and services which demand is slower than average but Philippine shares are increasing. These are located in the lower right quadrant of the reference point. Among the products for which Philippine exports are achievers are chemicals, fish (fresh and preserved), abaca fibers, baby carriages, toys, games, and sporting goods. Of the 57 clusters, 22% are achievers (14 clusters). For services exports, royalties and license fees exports are achievers constituting 0.04% of total services exports.

Laggards in declining markets are export products and services for which demand is slower than average and for which the Philippines lost market shares to others. They are located in the lower left quadrant of the reference point. Among the products for which Philippine exports are laggards are garments, footwear, furniture and fixtures, and basketworks. Of the 57 clusters, 46% (15 clusters) are laggards. For services exports, travel, financial expenditures and construction are laggards constituting 21.5% of total services exports.

An examination of a trade map is an important base by which dynamic changes may have occurred among the products in the classification space. A succeeding trade map can indicate exports improvement or deterioration during a 2-time period. For example products and services which were initially underachievers may move over to become champions – similarly for laggards and achievers. These would tend to validate the path of the selected exports.

### *II.2.1 Exports of Goods (Merchandise)*

The EDC exercise obviously begins with looking at the major Philippine exports and how they would fare at the end-period 2022. Although exports have exhibited significant product concentration, there is a long list of products exported with potentials for taking on the load for 2022. The EDC products list was drawn up by stakeholders including those with competence in the products identified. Some 13 product groups were singled out for projection into 2022. Table II.4 reports the products, their shares to total exports in 2016 and the projected export revenues by 2022.

These projected exports were systematically assessed in 2 steps. First, the implied annual growth rates for these were calculated by individual product group and by their totals. Second, the individual product group's historical annual growth rates were estimated using 2 periods – 2006-12 and 2006-16. Recall that that the determination of the PEDP 2018-22 feasibility used the 2 historical rates for its high and low projections, respectively (see Table II.3 above).

An additional step was taken which was to compare these results with the preliminary exports data – January-December 2017 – in terms of growth rates and other pertinent information on the prospects of the products involved. On the bases of these systematic procedures, the total exports for 2022 under this EDC exercise become one source of the feasible achievement of PEDP 2018-22. Indeed this may yield a range of feasible goods exports instead of a point estimate. Needless to say, it is the overall growth rate of these selected exports which is compared with the average growth rate assumed to achieve the end-period targets. Table II.4 thus includes the historical growth rates for these EDC-generated exports which are the assumptions used to derive the targeted exports, the latest January-December 2017 growth rates and the classification of these products following the trade map developed for PEDP 2015-17.

**Table II.4 EDC Selected Goods Exports Revenues 2022**  
 Expected and Past CAGR and Trade Map Classification

Product	Share	Exports	Exports	CAGR (percent)				Class
				%	2016	2022	2016-22	
		(US\$ M)	(US\$ M)					
Semiconductors	36.1	20,345	20,000	0.0	4.0	(0.9)	12.2	Laggard
Vehicle Autoparts	7.3	4,130	8,800	13.4	(3.2)	5.4		Champion
Wood Manufactures	4.2	2,800	5,000	10.1			416.9	Achiever
Coconut	2.5	1,420	2,700	11.2	10.7	6.5	30.6	Champion
Garments	1.8	1,038	5,000	29.8	(8.3)	(8.9)	(2.8)	Laggard
Aviation/Aerospace	1.3	706	1,000	5.9	11.1	43.8		Achiever
Bananas (fresh/dried)	1.2	685	1,000	6.5	7.8	4.5	(9.3)	Champion
Pineapple	1.2	672	1,500	14.2	11.0	11.7	(21.9)	Achiever
Travel goods/handbags	0.2	505	1,000	12.0	12.1	32.4	2.1	Champion
Oleochemicals	0.5	260	700	17.8	1.1	8.0	2.4	Achiever
Tuna	0.4	245	1,000	26.3	20.3	6.1	43.9	Champion
Carageenan	0.3	190	1,000	31.7	22.1	12.2	(17.8)	Champion

ActivatedCarbon	0.2	106	1,000	45.1	19.3	10.8	(0.3)	Champion
<b>Total</b>	57.2	33,102	49,700	7.0				

Source: EDC, Post-Session Report 2017; PSA ; PEDP 2015-17

The total of the EDC-generated exports for 2022 is US\$ 49.7 Billion with an implied annual growth rate of 7% which approximates the historical CAGR used in assessing the feasibility of the PDP end-period target for goods exports. These goods export products has an overall share of 57.2% of 2016 goods exports. The implied CAGR between 2018 and 2022 for many products indicates growth rates that seem to be ambitious relative to historical rates but when seen in terms of growth rates between 2016 and 2017 are reasonable (e.g., wood manufactures, tuna) though may not be for others (e.g., carageenan, activated carbon). Overall however the annual growth rate across all these products is seen to average out close to the historical rate which means that some may have quite high growth rates such as tuna and coconut while others below average. Semiconductors, which occupy 36.1% of goods exports in 2016 is conservatively seen not to grow between 2018 and 2022 – an unlikely scenario but nevertheless retained in the exercise to ensure the numbers do not unnecessarily become overoptimistic. Indeed semiconductors grew 12.2% in 2017 for a recovery.

The classification of the products is derived from the PEDP 2015-17 trade map for 2006-13 period. The EDC classification of these products according to their values and their expected 2022 revenues are relevant for strategy and organization purposes when interventions and government activities are programmed. But these are not essential to the assessment of what would close the gap in achieving the end-period exports targets.

Following the export potential trade map in the ITC, some of these individual products which are not captured in Table II.4 reveal substantial exports in 2016. Moreover, the annual growth rates of world imports for these products for 2012-16 appear to be increasing with the exception of 5 products (out of the 25 tagged from ITC) which had negative annual growth rates in the same period. Table II.5 shows these additional exports products that could compose the

aggregate exports revenues in 2022. The table only reports the totals for 2016 without their 2022 profile but includes annual growth of world imports, trade balance (exports less imports of the same products), share of world exports, and a measure of market access indicated by concentration of importing countries.

**Table II.5 Additional Selected Exports 2016**

Product	2016 Exports US\$ M	Trade Balance 2016 US\$ M	Annual Growth World Imports 2012-16 %p.a.	Share in World Exports (%)	Ranking in World Exports	Concentration Of Importing Countries
Elect IC (excl proc, controllers, memories)	5,121	3,438	3	2.6	8	0.14
Elect IC as processor and controllers	5,107	3,082	2	2.6	10	0.14
Elect IC as memories	2,729	1,845	12	2.4	8	0.14
Ignition wiring sets	2,001	1,929	5	5.6	5	0.28
Builders' joinery and carpentry	1,485	1,439	1	26.5	1	0.98
Parts of tel sets for cellular	1,087	(913)	6	0.8	11	0.12
Flooring panels	682	662	1	26.5	1	0.98
Gold, semi manufactured	599	465	14	1.1	14	0.37
Part & acc of ADP machines	510.9	(502.2)	(5)	0.5	19	0.17

Fixed electrical capacitors	471	274	2	4.1	7	0.24
Windows, French	365	364	1	16.1	2	0.98
Electrical parts of machinery	321	285	9	6.8	6	0.11
Parts and acc for tractors, motor vehicles	278.5	146.7	(2)	0.3	31	0.15
Spectacle lenses	265	224	3	5.3	6	0.12
Dessicated coconuts	194.7	194.6	8	30.7	1	0.17
Prep. or pres. Tuna	179.2	176.0	(7)	3	10	0.11
Parts of air condition machines	153	78	2	1	17	0.17
Machinery for making hot drinks	135	107	5	2.9	8	0.48
Handbags	131.4	116.5	(3)	1.2	11	0.58
Struc & parts of aluminum	128	79	3	1.7	14	0.97
Lead acid accumulators	124	97	1	1.5	15	0.34
Traveling bags	123.7	93.6	1	1.2	12	0.25
Switches for < 1,000 v	115	67	1	0.6	30	0.29
Sodium sulphides	108	107	1	34,2	1	1

Womens/girls blouses	75.7	72.8	(3)	3.4	7	0.87
<b>Total</b>	22,489					

Source: Trade Map, ITC

The total value of these selected exports in 2016 amounts to US\$ 22.5 Billion. However the first 3 items in the list obviously belong to the broader product group of semiconductors which is included in Table II.4. There may be others as well but are ignored in reporting the table. These 3 items total US\$ 12.96 Billion which should not be counted in Table II.5. The net of these additional selected exports in 2016 is therefore US\$ 9.53 Billion. How much these additional selected exports are expected to generate in 2022 is not in Table II.5 since these were not systematically assessed by stakeholders similar to those found in Table II.4. Nonetheless, they would be important as to how the overall targets are to be achieved and how revenue gaps are to be filled up. This is addressed in II.3 below.

A critical element to the feasibility of these sources for goods exports is the behavior of product groups in terms of their classification i.e. their movements in the product space indicated by the trade map. PEDP 2015-17 measured a trade map of Philippine exports between 2006 and 2013 for product sectors identified by NEDA. The findings revealed that 68% of Philippine exports in 2014 were below the horizontal demarcation of the average world exports growth rate; half of all exports were left of the vertical demarcation of constant share of world exports which meant these exports were losing market shares; 46% or nearly half of exports were laggards i.e., not only were they losing markets but growing by less than world exports growth.

A similar trade map was measured for the period 2013-16 in order to set the progress between the 2 time periods. The same cluster classification used in the previous trade map was followed though there is some variation between the earlier classifications. In addition there have been data adjustments for 2014 which have not been adopted in order to make any distinction only for the latter period. In addition the choice of the period may be sensitive in terms of results. But since the first trade map used 2013 as the last year of the data, it made sense to start with 2013 and end in 2016 when complete exports data were available.



The reference points in the 2 trade maps differ of course since the average growth rates of world exports differed between the period 2006-2013 and 2013-2016 which is the demarcation line for the horizontal axis in the map. Similarly the average share of Philippine exports differed during the same period which is the demarcation line for the vertical axis in the map. But the location of the various exports products and services in a trade map would still indicate the strength of the trade sector and a comparison between two of these maps reflect changes that may have taken place and more importantly the characteristics of trade.

The new trade map (Figure II.3) which compares the shares of the product groups belonging to each of the 4 quadrants between the 2 time periods show significant changes. Only 16% of all product groups had growth rates below world average compared to 68% reported in PEDP 2015-17 i.e. composed of exports which are laggards (losers) and achievers. Whereas close to half of exports of goods lost markets shares to others, in the succeeding period the number of exports losing market shares fell to 23%. The number of exports which are champions i.e. exports' growth rates above world average and increasing share of world exports stands at 62% of all goods exports.

What is even more important than these changes is the shifting of some of the exports products from being underachievers or laggards into being champions or achievers. These changes provide a strong support for achieving some of the more ambitious targets in the EDC exercise in Table II.4 and in the additional selected exports in Table II.5. For example, semiconductors have become champions from being laggards previously. Other coconut products, and travel goods/handbags remain champions, garments have become underachiever from being laggards, control and instrumentation has become champions after being achievers.

While it is true that with the weight of semiconductors in overall exports exerts influence on the movements of the export products groups, other products did change in behavior independently. It is therefore reasonable to suppose that exports in semiconductors may increase at the end-period 2022.

**Figure II.2 Comparative Trade Map: Goods 2006-13 and 2013-16**  
(In Percent of Total Goods Exports)

GOODS			
<i>Underachievers</i>		<i>Champions</i>	
<i>2006 - 13</i>	<i>2013 - 16</i>	<i>2006 - 13</i>	<i>2013 - 16</i>
4	21	28	62
46	2	22	14
<i>Laggards</i>		<i>Achievers</i>	

Source: PEDP 2015-17; PSA

### II.2.2 Export of Services

In contrast to the exports of merchandise and goods, the number of product groups in services trade is more limited. The BSP, which tracks trade in services statistics, lists only 24 distinct services which include sub-list (components of specific services e.g., other business services). While the groupings may not be pretty homogenous (e.g. in defining IT-BPO, computer services belong to another group while BPO is in other business services), they appear to be stable.

The EDC went through an exercise similar to that in drawing up goods exports in the PDP end-period 2022 in terms of their categorization for organization and strategy. But the products that were considered were fewer than in the goods exports. In services trade around 48% of all exports are accounted for by BPO higher than the 36 percent share of semiconductors in goods trade. Thus the 6 services exports the EDC assessed constituted 83% of the total.

Table II.6 is the result of the EDC exercise for services trade. The 6 services exports groups accounted for 83.2% of 2016 services exports amounting to US\$ 26 Billion. As in Table II.4 above the expected exports revenues from these

product groups are taken from the exercise. The implied growth rates from these end-period 2022 revenues are indicated along with their individual annual growth rates for 2006-12 and 2006-16 plus the recent January-December 2017 growth rates for the same period in 2016. Finally their classification based on the trade map for services exports found in PEDP 2015-17 is in the last column of the table.

**Table II.6 EDC Selected Services Exports Revenues: 2022**  
Expected and Past CAGR and Trade Map Classification

SERVICE	Share	Exports	Exports	CAGR (percent)				Class
				2016	2022	2016-22	2006-12	
	%	(US\$ M)	(US\$ M)					
Other Bus Services	48	15,125	40,000	17.5	13.6	11.2	11.6	Champion
Computer/Info Services	16.6	5,179	10,000	11.5	32.7	27.5	4.9	Champion
Tourism/Trade	16.5	5,153	10,200	12.0	2.3	3.8	35.8	Laggard
Freight	1.4	427	1,000	15.2	7.1	3.3	12.9	
Construction	0.2	71	1,000	55.1	6.3	(0.3)	(19.6)	Laggard
Audio-Visual	0.2	63	1,000	58.2	14.0	10.1	(11.8)	
	82.9	26,018	63,200	15.9			14.1	

Source: EDC, Post-Session Report 2017; BSP ; PEDP 2015-17

Table II.6 elicits 2 observations. First are the seemingly high implied annual growth rates on the way to 2022 by individual services group and in the aggregate. Indeed the implied annual growth rates for audio-visual and construction services are above 50% which are unrealistic given the negative annual growth rate for construction in 2006-16 and 2016-17. Second, the average implied annual growth rate for these selected services exports is more than 50%

higher than the historical rate followed in the goods exports results. Thus Table II.6 needs to be adjusted towards annual growth rates closer to the historical rates applied to achieve the targets.

The simplest assumption to follow is to apply the historical rate for all EDC selected services exports in the absence of more systematic assessment of these prospects as what was followed in the goods sectors. The historical annual growth rate for services exports used in Table II.3 is 10.17% which amounts to US\$ 46.5 Billion in 2022. This will be the number used to evaluate the feasibility of meeting the services exports target in the PDP.

It is worth noting that among the 6 services trade in the table it is Tourism and Trade which has seen a spike in growth rate for 2016-17. Along with the government's thrust in promoting the country as tourist destination, this could be a rising services export simultaneously contributing to the larger poverty-reducing inclusive growth. In contrast to the 55% growth seen for services which have not really taken a foothold, tourism's 35% growth rate is surprising and appears to manifest strength during the plan period.

Additional sources for increases in services exports come from 4 groups – "manufacturing services on physical inputs owned by others" which is the basis for the new BOP manual, transportation, financial, and personal, cultural, and recreational services which all appear to be promising. Their total exports revenues in 2016 amounted to US\$ 4,467 Million broken down into manufacturing services on physical inputs owned by others (US\$ 2,725 Million), transportation services (US\$ 1,179 Million), financial services (US\$ 194 Million), and personal, cultural, and recreational services (US\$ 169 Million).

The ability of these smaller number of services exports to deliver higher values in 2022 is a function of how these behaved in the recent past particularly their relative performance with the rest of the world and how much gains or losses in market shares for these products. Between 2 points in time may indicate the strength of these exports in reaching the targets aimed for them. A trade map will help in determining this ability.

The trade map for services exports in PEDP 2015-17 revealed that around 58% of services exports were champions in 2006-13 consisting of other business

services (BPO), insurance and pensions, and personal, cultural, and recreational services. 19.6% of these were in computer and information services and transportation services – considered achievers. Some 21.5% of services exports were laggards in terms of having growth rates below the world average and declining in shares of world markets. Finally, small portions (0.04%) of these services exports were underachievers which while growing above world average were also losing shares – illustrated by earnings from royalties and license fees.

A Trade Map for services exports in 2013-16 shows the distribution of these according to the same classification followed in PEDP 2015-17. They would partly reflect dynamic movements of the services.

**Figure II.3 Comparative Trade Map: Services, 2006-13 and 2013-16**  
(In Percent of Total Services Exports)

SERVICES			
<i>Underachievers</i>		<i>Champions</i>	
<i>2006 - 13</i>	<i>2013 - 16</i>	<i>2006 - 13</i>	<i>2013 - 16</i>
0.04	0.6	58	73
21	19	20	7
<i>Laggards</i>		<i>Achievers</i>	

Source: PEDP 2015-17; BSP

What the changes in the trade map between 2 time periods shows is a rising number of services exports becoming champions. These constitute more than 70% of all services exports. The number of laggards among services exports also declined from 21% to 19 %; achievers also declined from 20% to 7%. In short what accounted for the sharp increase in champions was the shift of services exports from laggards, underachievers, and achievers to becoming champions, and champions remaining champions all the time. Indeed financial services were laggards in 2006-13 and became champions in 2013-16; computer services from achievers to champions; maintenance and repair services from underachievers to champions; royalties and charges for IPR from underachievers to champions and

travel from laggard to underachiever. Those that remained the same were, among others, other business services (BPO) and transportation.

For both goods and services exports the content and the mechanism for achieving the PDP targets in 2022 seem to be more promising given the selected products and services that would compose the end-period profile. The limited assessment of international markets also appears to support the realization of the targets.

### II.3 Meeting PDP Targets

The starting point for PEDP 2018-22 is the PDP's (2017-2022) end-period target for exports of goods and services of US \$ 122 Billion to US \$ 130.8 Billion representing low and high ends of the targets, respectively (Table II.1). The task for PEDP 2018-22 is determining the feasibility of the targets that would synchronize the PEDP with the 6-year program of the Duterte administration. The exports targets are seen to significantly contribute to short to medium term development objectives in the PDP and in ensuring they are integral to the long-term vision of the country as *Ambisyon 2040*. Thus instead of the usual PEDP as 3-year rolling plan under the Export Development Act (RA 7844) the PEDP 2018-22 extends until the end-period of the PDP.

To ascertain the feasibility of the exports target the required CAGRs between the base year 2016 and end-period 2022 are examined if in the recent past experience exports of goods and services have had annual growth rates the targets require (Table II.2). The historical growth rate between 2006 and 2012 appears to achieve the low end of the exports targets (Table II.3). For one, it had the higher annual growth rate for both goods and services exports with the highest growth rate for goods exports. For another the mid-years between 2006 and 2016 show a slowdown not only for the Philippines but for world trade in general. Finally while services exports continued their upswing into 2014 their growth rates in 2006-12 remained robust.

The assessment that PDP exports targets are feasible requires identifying their possible sources and their likelihood in realizing the targets. In preparation for PEDP 2018-22, the EDC convened stakeholders from various export sectors, the government agencies involved in export development, and others to collectively map out an array of goods and services product groups seen to propel

the realization of the targets by end-period 2022. Some 13 of goods exports are part of the sources for increased revenues during the PDP (Table II.4). These exports have a total share of all goods exports in 2016 at 57.2%. The individual exports products' revenue by 2022 were reviewed in the EDC with the results that these are expected to grow annually at 7% within the past experience. The exception to this growth number is semiconductors which had suffered slowdown in 2016 and is projected to attain the same revenues as 2016.

Another potential source of goods exports to contribute to attaining end-period targets comes from collating specific product groups found in the International Trade Center trade map. Combined with data on annual growth rates for imports of these products, shares to world exports, and concentration ratios of importing countries, among others, the sum of these exports in 2016 is US \$ 22.5 Billion (Table II.5). However these include a number of integrated circuits which double-count the EDC exports list. Washing these out yields 2016 exports of US \$ 9.53 Billion. What would be the target revenues for these exports products is not indicated in the collected data but a simple assumption would be to follow the consideration in the EDC list and in the historical annual growth rates.

The Trade Map created for PEDP 2015-17 provided a still picture of the characteristics of Philippine exports in terms of their growth relative to world growth for similar products and in terms of their ability to raise, avoid declines, and keep their shares in world markets. What the exercise revealed are the limitations of Philippine exports – between 2006 and 2013 more than half of these lost market shares and more than two-thirds were annually growing slowly than the rest of the world. Consequently it is difficult to imagine their prospects reckoned in terms of reaching some targets. The degree of reliability to hit targets would be quite limited.

The analogous Trade Map created for PEDP 2018-22 for the period 2013-16 reveals a different picture. Many exports of goods show annual growth rates higher than peers in world markets but have also gained market shares – some 62% of the 57-plus product clusters are champions. Notable among them are fruits and vegetables (fresh, preserved, canned) and electronics (components and devices, control and instrumentation, electronic data processing, office equipment), many having kept their characteristics. Only a small number of

exports (2% or 10 product groups) are laggards where market shares are declining and annual growth rates below similar products. In short, better conditions suggesting better prospects and expanding opportunities.

The more important observation from the 2 trade maps is the implied dynamic changes among exports products over time. Many exports which were laggards had managed to move up to becoming champions indicating a promise of revival – for example, footwear and textile yarns and fabrics as well as garments (from laggard to underachiever) and consumer electronics. The shift from laggards to other characterization (achiever and underachiever) reveals that targets have more chances of being reached and attained.

The EDC also carried out a similar exercise for services exports which procedure was followed to establish the feasibility of meeting 2022 targets. The number of selected services exports targeted into 2022 is less than those identified for goods exports but occupy a larger share of total services exports – in 2016, 82.9% were evaluated for their end-period revenues. In part this is because 48% is accounted for by other business services (BPO).

Four other services which were not considered in the EDC deliberations were added as sources for reaching targets for the export of services – manufacturing services on physical inputs owned by others, transportation services, financial services, and personal, cultural, and recreational services. The first comes from the use of BOP Manual 6 for which shifts a significant export revenues from goods exports to services exports. These are products assembled from imported components on consignment (hence owned by others). The second to the fourth items are increasingly traded and assuming some importance to overall services exports. These 4 other services earned US\$ 4.5 Billion in 2016 and can be counted upon in reaching 2022 targets.

The Trade Map for services exports in PEDP 2015-17 depicts more upbeat characterizations. Majority of these exports have increased their market shares between 2006 and 2013 and over half have had annual growth rates exceeding world averages. An inherent bias in the distribution of services exports comes from the weight exerted by other business services which unduly tilt in whatever direction these services move. Thus the 58% of services exports which are champions, a large part of these are in other business services despite there being



2 other services (personal, cultural, and recreational services and insurance and pensions). The laggards of these services exports are travel and tourism services, financial services and construction services, meaning exports of these services have lost market shares and have annual growth rates below world averages.

The services exports' Trade Map for PEDP 2018-22 has about the same distribution as in the previous period's Trade Map. The dynamic shifts however are as prominent as those in the goods exports. The share of services exports that are champions further increased from 58% to 73% while those which were achievers dramatically falls from 20% of all services exports to 7%. The number of services exports which are laggards have remained about the same at 21% in PEDP 2015-17 to 19% in PEDP 2018-22 i.e., between 2006-13 and 2013-16. This suggests better confidence in achieving the targets set for services exports at end-period 2022.

These sources of increases in goods and services exports towards reaching the targets set in the PDP fall short because the identified exports products and services do not exhaust all those traded in 2016. This is particularly true for goods exports. There is therefore a gap that needs to be further specified ranging from US \$ 4.9 Billion to US \$ 19.8 Billion. The analysis of how these targeted exports have behaved, their apparent dynamism reflected in the comparative trade maps, and the recovering international markets augur well that not only those identified exports may exceed their targets but new ones that are yet to evolve can eventually fill up the gaps and achieve the planned exports.

Table II.7 summarizes PEDP 2018-22. The difference between the revenues from sources and targets indicates what products and amounts have yet to be identified and targeted. If the low-estimate target is followed, using high historical CAGR and the high-estimate of sources, the incremental amount to be generated would be US \$ 4.9 Billion in the period 2018-22. This would not seem to be a tall order given the right conditions and strategies.

**Table II.7 Aggregate Exports: Actual and Targets**  
PDP 2017-2022 and PEDP 2018-22

	2016 (Actual) US\$ B		Targets (BMP6) US\$ B (2022)		CAGR (%)	
	(BPM5)	(BPM6)	Low	High	Low	High
<b>PDP</b>						
Goods Exports Targets	57.4	42.7	61.0	62.2	6.2	6.6
Services Exports Targets	31.3	31.3	61.0	68.6	12.3	14.3
<b>Total</b>	<b>88.7</b>	<b>74.0</b>	<b>122.0</b>	<b>130.8</b>		
<b>PEDP 2018-22</b>						
<b>Achieving the Targets</b>					(2006-16)	(2006-12)
Goods Exports			52.1	64.5	3.35	7.10
Services Exports			58.3	57.8	10.95	10.17
<b>Total</b>			<b>110.4</b>	<b>122.3</b>	<b>5.88</b>	<b>8.13</b>
<b>Sources</b>						
Selected Goods Exports (EDC)	33.1	24.5	37.0	45.0	7.1	10.6
Additional Goods Exports	9.5	7.1	10.7	13.0	7.1	10.6
Selected Services Exports (EDC)	26.1	26.1	46.5	50.7	10.2	11.7
Additional Services Exports	4.5	4.5	8.0	8.7	10.2	11.7
<b>Total</b>			<b>102.2</b>	<b>117.4</b>		
<b>Difference</b>						
Goods Exports Target			(-13.3)	(-6.5)		
Services Exports Target			(- 6.5)	1.6		
<b>Total</b>			<b>(-19.8)</b>	<b>(-4.9)</b>		

Sources: PDP (2017), EDC Post Session Report (2017)

#### II.4 Focusing Export Targets

PEDP 2018-22 was derived using EDC-drawn up selected but not exhaustive goods and services exports, the additional exports coming from other sources, and the changing trade maps of Philippine exports. A thorough review and analysis of these approaches to achieving the country's targets for exports at the end of the PDP period indicated these fall, with some qualification, within the bounds of historically (i.e., recent) experienced growth rates. The changing character of these exports, and overall exports in general, adds greater confidence to the plan. The more important implication from the derivation of PEDP 2018-22 is to develop a more parsimonious goods and services identification which emanates, of course, from the exercises noted above. More pointedly, there are various interrelated factors that suggest focusing export targets.

First of all, the EDC-drawn up list, additional sources, and trade map point to better and stronger path to achieving the targets set in PDP. What this means is that the expected 2022 targets from the systematic sources, and exports behavior, are closer to 80-90% of PDP targets from a base that is less than 70% of 2016 exports. To the extent that these will be realized with focused interventions and strategies (see Part IV) PEDP 2018-22 would do well by a further zoom on fewer goods and services exports that are likely to deliver revenues over and above what appears to be feasible.

Second, a smaller set of export targets effectively consolidates the Philippines' limited resources particularly those intended to market them i.e., the country's foreign posts, and public and private agencies in the country that continually plant the Philippine flag in international markets. This may require a review and modification of existing practices and arrangements giving way to sharp and focused exports targets, more careful selection of matching and market missions and other administrative preparation and planning.

Third, inter-linkages among focused goods and services scenarios tend to promote mutually reinforcing results better than equal attention to diverse products and services. In the FGD in preparation for PEDP 2018-22, stakeholders from some goods exports saw concrete linkages with services exports in such areas as automation of supply tasks (inventory management) and market transactions, creation of on-line presence and other digital innovations that exploit the country's capacities in information technology.

Finally, it would make sense to focus on goods and services with potentially wider spread and impacts due to comparative advantages or in meeting global challenges. In the context of the PEDP 2018-22 derivations, this would mean looking for goods and services that have weight in the overall exports, possess or can acquire comparative and competitive advantages, poised to competently address emerging challenges, and can be candidates for innovation and creativity.

Among all goods and services exports three of them seem to stand out – electronics, processed food, vegetables, and beverages, and information technology. This does not mean 3 homogenous products or services since obviously each one can be further broken down to many sub-products and related services. But they can be considered cohesive groups. Why these 3 and not others (3 or 4 or 5 or even 10)? For one, a focus on 3 products and services reflects a sense of priorities the extreme of which is a focus on a mono-product (think Republic of Nauru focus on phosphatic products). And 3 may be more manageable than, say, 4, 5 or 10. It is also essential that any 3 would satisfy the factors that make focused export targets convincing. In any case if there are equally compelling arguments for other products what is necessary is to ensure they capture the *raison d'être* for them.

The PSA specifies 9 components comprising electronics products exports the largest of which is devices (semiconductors). Until their turnaround in 2017, their past slowdown (not entirely due to the Philippines) dragged the rest of the country's exports, these comprising more than a third in share and thus weight in both the "feast and famine" of trade. Indeed this sector has fruitful linkages with other exports products and services. But for so long electronics exports have thrived in basic assembly even as new challenges emerged. What may be needed, if this becomes a focused export target, is its systematic review and mapping. A prior direction will have to be addressed as well – whether to move upstream (e.g. wafer fabrication) or downstream (e.g. IC-design and associated products/services). An expert-written road map has been completed which would be a good starting point in deciding on its candidacy for a focus export target. While electronics products exports have been recovering, accelerating developments in Industry and Services 4.0 (see Part III) point to an even higher demand for electronics products as they become embedded in different factory stages, in autonomous vehicles, in AI-powered services, in the Internet of Things and more. For example, the manufacture of the world's fastest super-computer (Sunway TaihuLight) utilized mostly indigenous-Chinese sources of integrated circuits.



Consumers, world-wide, have seen changes in habit, consciousness, and preferences especially in terms of food consumption. Continued urbanization has increased demand for more accessible food services and a one-stop shop for all types of unprocessed and processed food. The latter is manifested by the emergence and growth of supermarkets, hypermarkets, convenience stores (standard and petrol/gas/service stations), independent food stores, and discounters. Consumers are looking for stronger links with farmers and food sources. Consumers are also more conscious of and recognize sustainable agriculture as alternative to conventional ways (e.g., more climate-friendly farming produce). This is apart from health-related consciousness through food products with low carbohydrate, low cholesterol, and low transfat, among others. Preferences have changed – less cereal, more horticulture, meat and oil crops, and significantly increasing shares of food expenditures on fruits and vegetables and bread across all income groups. The Philippines has comparative advantages in tropical-resource based products into different forms (fresh, canned, dried, processed and semi-processed, etc.) but to really obtain greater market foothold, the country needs to exploit these consumer changes from product differentiation to catering to packaging, safety, nutritional content, global standards, etc. In terms of dynamism many of these processed fruits and vegetables are champions in the trade maps and have retained these distinctions over time. And when the scope of processed food, beverage, and vegetable is expanded in consonance with these changing consumption characteristics potential revenues could be higher. Broadly, these now encompass major food products categories of ready meals, baked foods, breakfast cereals, soup, baby food, potato chips, instant noodles, pasta, biscuits, chocolate confectionery, yogurts, ice creams, sauces, dressings and condiments, and non-alcoholic beverages.

If processed food and beverages, and other food products in general, are to be focused exports targets, the path to hitting it big is arduous though promising. Producers have to subscribe to international best practices and submit to third-party audits for certain procedures. They adhere to product standards including stringent requirements such as traceability of fruits and horticulture. Collaboration, joint ventures and other forms of market penetration and knowledge acquisition increasingly becomes essential as well as encouraging FDI into these products groups with companies with established reputations interested in the country's advantages and opportunities (e.g., India's focus on food networks with Kraft Food, Nestlé, Hershey, PepsiCo, etc). The potential from this comparative advantage is far

from being fully exploited – in fact, in January-December 2017, exports of processed food and beverage, processed tropical fruits, and other fruits and vegetables remain low though not insignificant (around US\$ 1.14 Billion) in an international market value of US\$ 3.03 Trillion by 2020.

Information technology as a services export encompasses many kinds of services. It refers to a specific item in the BOP account consistent with the broader definition of IT i.e., computational data processing, decision support, and business software. The item is “...other business services...” which include “research and development services”, “professional and management consulting services”, and “technical, trade-related and other business services”. By far, the latter constitutes the largest share of other business services. In the Philippines and many other developing countries this captures business process outsourcing (BPO) – technically customer services, post-sales services, product inquiries and profiles which traditionally were supplied in-country but with the Internet and digital technology have been outsourced to other countries without loss of quality and clarity. Many call-center agents are employed in the BPO in addition to other back-end services (e.g., accounting, payroll, etc.). There is also another item in the BOP which refers to IT which is telecommunications, computer, and information services. Together, exports of these 2 items are imputed to be IT though strictly it should net out research and development, professional management and consulting, telecommunications, and information services.

In the last several years the IT-BPO account has been the flagship of the services exports in the country's aggregate exports of goods and services. Exports of other business services have been annually growing at 11.2% between 2006 and 2016 while telecommunications, computer and information services at 18.2% in the same period. If IT-BPO is to be a focus export target, what would be its prospects towards the PDP end-period 2022? Whether it is going to be a sunset industry or not would depend on the pace and pattern of the emerging Industry and Services 4.0 (see Part III). While the threat of AI-driven machines and robots substituting for BPO and related services is real, a lot would depend on how such tasks are further split up and how much would become the “personal” part of the exported services. In any case there may even be a surge of BPO services as prelude to their (partial) mechanization (or robotization). On the other hand, to the extent that the country is able to capitalize on the cumulative needs for computer services related to Industry and Services 4.0, the IT part of IT-BPO could see further increases in revenues. The relevance of making this a focused export is that of being able to identify

where the potentials are, readying the sector for these, and updating its industry road map beyond PEDP 2018-22. In the same vein, it would make sense to add to this priority the export of tourism related services (transport and travel) given its recent spike in growth rate. This may appear distinct from IT-BPM focus thus providing different substantive services with potentially strong links with goods industries. On the other hand, where Services 4.0 shade into tourism, the industry links with IT.

These 3 focus export targets – electronics products and IT-BPO being heavyweights in the goods and services sectors, respectively, and processed food, beverages, and vegetables which though not heavyweight have bright prospects – are already part of the array of goods and services seen to contribute to realizing the overall targets for 2022. The purposes of pulling them out from the identified sources (only partly for processed food, beverages, and vegetables) for achieving the targets are to monitor their progress and ensure bottlenecks and constraints are addressed; undertake systematic review of their broader prospects and carry out needed reforms; and implement dedicated strategies aimed at exceeding their targets. In other words, with a focus on 3 export targets, an end result would be aggregate exports that would exceed the targets set by the PDP plan.

These 3 export targets are not necessarily the best-3 although the rationale behind their choice has been explained above. Indeed these should further be elaborated and developed into a true priority set for exports target. There may turn out to be other best-3 exports useful for a concerted focus integral to PEDP 2018-22. What is more important is to adopt the principle of focusing export targets as a way of ensuring these are achieved and even exceeded especially by those being focused.

### *II.5 PEDP 2018-22 Aggregate Plan*

The feasibility of achieving the exports targets in PDP in terms of historical experience and in specific exports products and services indicate PEDP 2018-22 is a workable plan. The details of these have been worked out in this part. Table II.7 is a consolidated summary of the feasibility test. The earlier tables and Figures II.1 and II.2 show the dynamic responses of the goods and services export between 2 time periods of the 2 PEDPs.

Table II.8 is the set of targets for the exports of goods and services for each year of PEDP 2018-22 for both low and high estimates. The underlying

implied annual growth rates are consistent with the exports targets feasibility found in Table II.7. But, as will be noted, the high estimate of targets in PEDP 2018-22 achieves only the low estimate of the PDP targets. Thus the forecast for 2022 of US\$ 122.3 Billion is the low target in PDP. See the upper part of Table II.7.

**Table II.8 Annual Exports of Goods and Services Targets  
(Based on the PDP)**

	Baseline (2016) BPM6	2017		2018		2019		2020		2021		2022	
		Low	High	Low	High	Low	High	Low	High	Low	High	Low	High
Exports Goods (US\$B)	43.4	45.1	45.6	47.8	48.8	51.2	52.7	54.8	56.9	59.2	62.0	61.0	62.7
Exports Services (US\$B)	31.4	34.5	34.9	38.3	39.0	42.6	43.7	47.2	49.0	52.4	55.3	61.0	68.0
Total Exports (US\$B)	74.8	79.7	80.4	86.2	87.8	93.7	96.4	102.0	105.8	111.6	117.3	122.0	130.7

Sources: PDP (2017); DTI (2017)

Totals may not add up due to rounding



### III. Planning for Industry and Services 4.0

The magnitude of Philippine exports of goods and services and their ability to attain markets and expand them over time, in the end, is a function of its relative abundance of resources to produce them or deliver in the case of services. But, more completely, it is a function of how those (abundant) resources are combined with capital, human resources, and technology to manufacture products or deliver services.

The technology to manufacture goods and deliver services has recently occupied prominence in global markets not as an extension of the first industrial revolution (agriculture to manufacturing) and Industry 1.0 (mechanization), or the second industrial revolution (manufacturing to services) and Industry 2.0 (mass production) or the third industrial revolution (use of information technology) and Industry 3.0 (automation) but a totally new disruption called Industry 4.0. Although it began in 2011 as a vision for industry it has caught fire and likely to reconfigure not only the entire manufacturing sector but services as well.

The important questions for the Philippines in general and PEDP 2018-22 in particular are the following: (a) are developments in Industry and Services 4.0 going to affect the array of goods and services exports identified in the Plan?, (b) If so, are they likely to take place in the Plan's time frame?, (c) whether these developments are likely to take place or not, is there a need for the country to include Industry and Services 4.0 in the Plan?

This section aims to address these questions cursorily not comprehensively in as much as these deserve more detail than can be tackled here. It attempts to flag down attention and ways to gear the country up in terms of what the configuration of goods and services exports are during the Plan period and beyond.

Firstly, the underlying basis for industry and services reconfiguration is briefly described. Then some of the changes taking place in industry and services sectors are separately illustrated especially those which have reference to the goods and services exports in PEDP 2018-22. Finally, some of the essentials necessary to gear the country for Industry and Services 4.0 are highlighted.

### *III.1 Enablers of Industry and Services 4.0*

There are many objectives attributed to Industry 4.0 since its seminal introduction in 2011. In few words, it is the use of combinations of digital technologies that results in more efficient manufacturing processes, optimal use of resources, and interconnected outside the factory premises. Around 10 of these (in combination) appear to be critical for transforming manufacturing into a cohesive smart factory utilizing real-time data for production decision-making, using robots to assist in floor operations, vertical and horizontal systems integration, simulations to test and optimize machines in plants, and additive manufacturing – all these aimed at higher productivity, speed, and precision leading to better competitiveness and profitability.

Some of these technology enablers of Industry 4.0 are worth mentioning. First of all is the rise of the super-computers. Not only do these devices and systems have the properties of speed and storage, they are also smaller in physical sizes and may become more mobile relative to what we had a few decades back. Second and related to these devices are the complements coming from Data Compression, Big Data, Internet of Things, and Cloud Computing. Indeed analytics emerge as critical to Industry 4.0 as well as in the evolution of services industry development. In the desire to create mobile super-computers, cloud computing takes over the capacity needs and thus the ability of the technology to be more nimble and retaining its computing and analytical powers. Third, robotics has progressed at a faster pace than otherwise as part of AI. If 3-D printing is additive manufacturing, robotics is additive services. While mechanical robots have literally been around for some time, the emergence of other digital technologies has led not only to more applications and related devices but also mimicking humans. Finally, the magnitude of algorithm in any automation in services is larger than in mechanical automation in industry thus within the realm of AI. What this means is that as new data are retrieved, machine learning takes place and may improve the algorithm itself.

The numerous applications that have evolved out of the many combinations in using the technology enablers are really what is driving Industry 4.0 and extended into Services 4.0. In addition are the many bold entrepreneurs with drive, determination, and insight in carrying out many applications in different sectors of the industry and services. There is also the seeming

availability of venture capital willing to take measured risks in supporting these applications. There is of course the larger and conducive environment for Industry and Services 4.0 that varies across countries which in turn engenders further agglomeration and external economies.

Given the widespread applications among many products, the discovery of new or different raw materials for the new technology, and the continuing use of the Internet platform in industry and service – all these suggest a momentum is building up so that transformation and restructuring may take place sooner than later. How soon may depend on what is taking place in both industry and services.

### *III.2 Illustrations in Industry 4.0*

On the production side the manufacture of super-computers will continue to rely on integrated circuits, semi-conductors, and other electronics but emphasizes on nano-technology and improved designs. To the extent that developing countries have acquired these capacities over time and supplied them along the value chain does not give them automatic niche in those markets. Readiness will have to re-boot from mass production in Industry 3.0 to customized production in Industry 4.0, from assembly to design combining IT and OT. Education, skills training, and incubation hubs need further enhancements to become part of the supply chain in the emerging technologies.

Overall, while both traditional and new products are still beta and prototypes, they are already giving glimpses of an Industry 4.0 configuration. For example, whereas Industry 2.0 is characterized as assembly mass production for more or less homogeneous consumers, the new technology (e.g., 3-D printing) moves towards mass customization for specific consumers in terms of what they want, how they want, and when they want. In the past this meant firms had to be large to acquire economies of scale and a factory of sufficient size for line assembly. These required massive investments requiring massive volumes of production with costs amortized over a long period of time. Instead of mass production Industry 4.0 may see batch production. Inventories may be out-of-style as the Internet-of-Things and supply chain synchronization optimize production. There are already consumer products which have moved towards customization such as footwear which can be manufactured “in-store” custom-built in size, style, and design for a specific customer in a short period of time (e.g., 60 minutes) i.e., “while-you-wait” unlike being part of a line assembly.

Basically, this is not of course new since before a mass production, consumer products were made to specification unique to customers such as garments and footwear.

The greater use of 3-D printing, laser cutting, and robotization literally shrinks the factory. In fact the technology enablers have made vertical farming in agriculture more viable in what had been numerous hit-and-miss attempts in the past. Through a combination of lights, sensors, cameras, and AI, apart from innovations in physical structures, vertical farming is now able to yields greens that are 350 times more produce per unit of area as conventional farms with a fraction of the water. While the trade-offs between savings via technology (e.g., productivity) and their costs (e.g., energy and urban real estate where vertical farms are expected to be located) are sorted out, there is no doubt the wave of agriculture's future is also through enabling technologies. Beyond greens are challenges for technology-enabled tree-based fruits and root-crops which feed into their processed forms for eventual exports.

Even products which have long been the staple of the manufacturing sector in industry are being encroached by technology-driven changes in materials and processes. Motor vehicle production, manufacturing's weather vane for assembly-line, is being eroded by 3-D metal printing, lighter materials, and mechanical robots (moving into AI-robots). Since it branches out to numerous other industries and services' including motor vehicle parts the Philippines is exporting, these of necessity will be affected when manufacturing re-boots. As motor vehicle manufacturing becomes more technology-enabled, the magnitudes of the electronics products they will require further escalate and displace those mechanical parts the country has comparative advantages into controlling and related other software needed. What falls into this category of electronics products exports are control and instrumentation (3<sup>rd</sup> largest of electronics products exports) and aviation/aerospace products, among others.

### *III.3 Illustrations in Services 4.0*

As the services industries embrace all of the enabling technologies, significant transformation ultimately takes place. Services considered to be widely personal may become even more automated displacing substantial employment. Tourism and financial services for example may be robotized – think about tourist guides herding tourists through historic sites with programmed spiels associated

with site recognition. Financial services could be a candidate for a full-blown AI with accumulating machine learning. Hotel front desks could be handled by robots including baggage attendant deliveries and in-room services. At the national level value-added of these transformed services tend to remain significant (though may cease to be exported) but employment may suffer. International trade in these kinds of services would still be functions of resource conditions and comparative advantages, but reliance on them for employment will be subdued.

Services trade has considerably expanded (in some Asian economies at faster clip than goods trade) and it goes without saying that patterns may change and reliance on specific sources such as BPO and computer and communication services may be threatened arising from the applications of technology enablers. A key distinction is whether a service can be delivered electronically without quality diminution or requiring a personal, face-to-face contact i.e., between personal and impersonal services. Level of education and skill is not a distinguishing characteristic – as for example between a taxi driver and an airline pilot. Yet autonomous vehicles are already here and aircrafts are now fitted with cognitive programs. Although the degree of electronic delivery is essential in a service becoming tradable, its transformation due to technology is necessary before its trade. Perhaps a greater distinction is between a device that can deliver a service that sufficiently mimics its human counterpart by exhibiting intelligence, perceives its environment, and can take actions or decisions that maximizes chances of success at a goal, or an irreplaceable personal service.

There are enablers that are more important for Services 4.0 than Industry 4.0. The combination of speed in super-computers and AI hasten humanoid services replacing real persons. Which services would be displaced depends on the scale of tasks and their repetitiveness. As big data are fed into the system at speeds technology allows, machine learning accelerates and thus displacement takes place. The ability of autonomous vehicles, for example, to replace human drivers increases as the AI absorbs more images that humans normally see. This would not be as complex as the AI deployed in the factory floor where the repetitive tasks are more confined and limited.

The dominant part of services exports, for many developing countries, is the delivery of business services in part due to advances in telecommunications

with their declining costs and obviously the lower labor costs giving them advantage in this type of services trade. These business services have been outsourced for some time. Services 4.0 directly threaten the core foundation of these types of services exports. As machine costs go down and other technology enablers are able to mimic predictable human behavior some of these business services exports begin to lose advantages. With changes in the costs structures liberalization of services Mode 4 may lose its attraction.

Indeed some nursing tasks are being handled by robots in Belgian hospitals and they deliver medicines between floors in Japan. Some tasks in customer services are carried out by robots – banks in Sweden. What is happening is splitting further the tasks that can be handled by AI and those that still need “human touch”. This does not mean no further splitting eventually takes place expanding those assumed by AI. At the fast pace of these developments industry observers anticipate that substantial transformation may happen in 2027 and that in-between i.e., 2021, significant displacements by AI of some employment or tasks within them.

#### *III.4 Gearing up for Industry and Services 4.0*

Much of what are illustrated as goods and services that spring from Industry and Services 4.0 are prototypes, demonstration models, and experiments that have yet to see wide replication and proven to be commercially viable. It is true however that while beta-type, they are within the parameters of industries. And the handwriting is on the wall – Industry and Services 4.0 is here and may be sooner. What is needed is to gear up the country to ensure it is ahead of the curve in preparing a climate for it.

There are a number of areas in which the country can pay attention to in ensuring an Industry and Services 4.0 soft landing with varying degrees of constraints. First is that many of applications using various (technology) enablers or their combinations are found in manufacturing. These can be adopted in the relevant industries in the Philippines for which proprietary and intellectual property rights need to be acquired. It may be possible to “reverse-engineer” if a physical process is involved or “reverse-program” for software (in the absence of source code). Yet the technologies themselves can be independently utilized to develop different applications aimed for example at satisfying varied consumer demands i.e., mass customization. Combinations could be extensive but in the

end characterized as Industry 4.0. Creative uses of 3-D printing in a production process results in productivity increases and superior quality more so when combined with other technologies, materials, and other end-to-end modifications.

Innovations that have started elsewhere are likely to be further prototyped – either by virtue of being multinationals with representations in the country or actual plans to replicate innovations in other locations for which the Philippines can be a candidate. For example, the prototype for vertical farming is considering their applications to 500 other urban areas in the world beset by land scarcity, logistics constraints with traditional farming, and costs. The extent to which the Philippines is part of the network of suppliers to the manufacture of autonomous vehicles, it brings the country into a major frontier in Industry 4.0. Innovations in services involving applications range from those related to AI in BPO such as machine training and learning to developments in tourism and financial services which have also seen prototype Services 4.0 innovations.

Second, it is quite evident that apart from the technologies themselves, the evolution of their various combined uses has been spawned by creativity, imagination, and innovativeness of many entrepreneurs, industry specialists, and those who studied different products and services. What is needed is to create an environment for Industry and Services 4.0 that nurtures creativity, fires up imagination, and develops innovations. While it is difficult to design a framework for such an environment the road map for IC in electronics suggests a package – clusters involving academia (talent development), public institutes (research and innovation), and private sector (design, fabrication, downstream sub-sectors); clustering foundation (governance including policy, measures, strategic planning, etc.); and agglomeration infrastructure (centers of gravity in Greater Manila Area and in Cebu) for launch pad platforms and incubation hubs. Developing a cadre of entrepreneurs with grit, drive, and unique ability to exploit this package is perhaps more difficult in the absence of a solid roadmap to develop them.

Third, the regulatory climate (and governance noted above) has to have a more facilitative as well as supportive functions. The former requires conducive atmosphere for “start-ups” to have a more-than-even chance of manufacturing (prototype) products and delivering innovative services along Industry and Services 4.0. In addition the regulatory establishment has to be in tandem with

new technology-driven set-up as it is more often the case that science is ahead of the needed regulations where warranted (e.g. for consumer safety and protection) without being restrictive upfront. The latter requires more flexible rules and regulations regarding critical inputs to creativity and innovation (e.g. labor laws).

Finally, it goes without saying that capital and investments are both enablers and constraints to gearing up for Industry and Services 4.0. An important element related to the accelerating pace of these disruptive goods and services is the seeming availability of venture capital in support of creativity and innovation. Conversely the development of Industry and Services 4.0 has not been constrained by lack of capital and investment. Whether there is a pool of venture capital in the Philippines are not quite clear or regulatory requirements, if any, in setting up riskier investment portfolio.

In summary the seemingly maturing enablers (e.g. large scale 3-D printing) have given what were only initial visions (or relevant in Germany where it started) in Industry 4.0 a significant beachhead in industry in general and manufacturing in particular and into services themselves. Many of the illustrative goods and services under this rubric may not have discernible impacts on the path of PEDP 2018-22 and it is uncertain if a momentum for Industry and Services 4.0 will take place before end-period of PDP in 2022. What is clear from the review is that industry and services are expected to reconfigure and therefore their trade as well. The seeming role of countries in the spectrum of goods and services trade faces adjustments including their bases which may significantly differ from the current configuration. It is then necessary to gear up the country for Industry and Services 4.0 and to incorporate modest attention to them since many would be equally valid even without the disruption of the industry and trade developments.





#### IV. Strategies

A review of the strategies adopted to implement PEDP 2015-17 was made in Part I of PEDP 2018-22 summarizing the individual strategies, the specific actions required, and their progress based on the government agency or organization overseeing their implementation. Many had achieved significant progress with some delayed in actions. There is no doubt they could have helped reach the targets set in the Plan but the overall international headwinds were too strong affecting not just the Philippines but most of the other Asian economies.

This part spells out a set of strategies to assist in the execution of PEDP 2018-22. While the same kinds of strategies may be followed there are subtle differences in the way these are proposed to be organized. Instead of individual strategies viewed independently they are grouped according to some criteria. It is also important to take into account the need to gear up the country for Industry and Services 4.0. The FGD conducted by EDC in the preparation for PEDP 2018-22 pointed to an implied strategy which is indicated. Then the dedicated strategies for PEDP 2018-22 are finally adjusted with the recent government declaration on an expanded list of government agencies participating in the strategy implementation. A strategy framework is first introduced. Then the specific strategies to accompany the Plan are laid out incorporating but consolidating those proposed in the previous PEDP 2015-17 along with their rationale. Those strategies intended to prepare the country for Industry and Services 4.0 are highlighted. The process of their implementation is reviewed from Part I.2 in the light of the new Memorandum Circular involving government agencies responsible for supporting the Plan. A short, selected, and limited strategy comparison is made with other countries. Finally some costing evaluation is illustrated.

##### *IV.1 Strategy Framework*

PEDP 2015-17 followed a strategy framework emphasizing that interventions should be neutral i.e., meant to influence production whether for domestic and international markets. The latter is seen in the context of being integral to a product's global value chain and the specific strategies involved would be to ensure the country's fit according to its comparative and competitive advantages. Given this same context, PEDP 2018-22 expands a strategy

framework along several fronts. The strategies previously adapted are grouped into collective strategies based on more cohesive interactions and closer monitoring. The outcome of the FGD that was convened suggests an underlying strategy which should form part of the strategies for PEDP 2018-22.

Despite the assertion that policy and regulatory interventions ought to be neutral in intent, the PEDP 2015-17 identified key export sectors and emerging export sectors as focused products and services to be given sets of packages of support – 13 products and services groups (which actually spawns more than this number). The government's – through the DTI – new industrial policy, *Inclusive, Innovation Industrial Strategy (I<sup>3</sup>S)*, focuses on 12 sub-sectors, using their individual road maps, as foundation for industrial development and realizing exports potentials. These 12 (auto and auto parts, electronic manufacturing services, aerospace parts and aircraft maintenance, repair and overhaul, chemicals, ship-building and ship-repair, furniture, garments, and creative industries, irons and steel, tool and die, agribusiness, construction, IT-BPM and e-commerce, transport and logistics, and tourism) would lead to an integrated industrial development in the country where inter-related industries feed on each other both in the domestic and international markets.

On the other hand, for PEDP 2018-22 it is suggested to focus on fewer number of products and services groups – 3 of them (which actually spawns more than this number) which are part of I<sup>3</sup>S. More explicit criteria are advanced for the selection of the few products and services groups as focus for strategy and intervention. There are many other reasons to focus on selected products and services for support aside from the ones suggested in PEDP 2018-22 – distortions in their value chain, potential externalities that cannot be realized without support, market problems, among others. It is critical to be aware that such selection does not exhaust practically all products and services (in which case all are priorities and markets in the end decide values and rankings) and, more importantly, does not inordinately claim the limited resources for support. This is why it makes sense to be neutral in support and at the same time incrementally focus on few products and services groups.

The prioritization of strategies particularly their timing and sequencing from among the public and private agencies that would carry them out is the more difficult part in any strategy framework. Without some quantitative idea of

the relative impacts of different strategies (especially individually and collectively) they could have many starting combinations. When resources needed to implement them are limited in availability, timing and sequencing become more crucial more so if those resources are not independent of the regular budgetary support by the concerned public agencies. Needless to say, strategy prioritization cannot be avoided.

#### IV.2 Strategies

In Part I's review of the 8 strategies implemented for PEDP 2015-17 – (a) design comprehensive packages of support for selected sectors, (b) remove unnecessary regulatory impediments to goods movement and services delivery, (c) raise productivity and competitiveness of Philippine enterprises, (d) upgrade exports quality and standards, (e) improve exporters' access to trade finance, (f) exploit opportunities from regional and preferential trading arrangements to expand market access, explore new trading partners, and develop new export products, (g) launch well-coordinated and sufficiently-funded exports and investment promotion campaign, and (h) enhance export sectors' innovative capacity through an efficient system of national innovation – there were no indications on their relative importance in achieving the exports targets. But there is no doubt that these are important strategies though not exhaustive.

There are no clear reasons for abandoning any of them and it would be equally appropriate to take them into PEDP 2018-22 with greater sense of being fully grounded given their progress as reviewed earlier. It would be useful then to start with these strategies and consolidate them into more effective groups of strategies. In addition would be the implied strategies that come from the FGD in preparation for the Plan. The bases for consolidation of strategies are the seeming common goal among them, the reinforcement effects if they are taken together, and a clearer outcome. Three strategies would emerge from this consolidation: (1) *Improve the Overall Climate for Export Development*; (2) *Exploit Existing and Prospective Opportunities from Trading Arrangements*; and (3) *Design Comprehensive Packages of Support for Selected Products and Services Sectors*.

(1) *Improve the overall climate for export development* – The results of the FGD provide a sense of how to tweak the overall environment in general and the trade environment in particular to become a friendlier climate for the evolution of increasing exports that address their persistent structural characteristics, and

overcome institutional, behavioral, and policy barriers. These include (b), (c), (d), (e), and (h) above which were flagged down in PEDP 2015-17 i.e., removing unnecessary regulatory impediments i.e., laws, rules and regulations in order to reduce the cost to exporters and importers and in general enhance trade facilitation, raising productivity and competitiveness of Philippine enterprises such as fostering forward and backward linkages across sectors through value chains, upgrading exports quality and standards by adopting best practices and successful business models in production processes, improving access to trade finance through measures that streamline and simplify loan processes for MSMEs, cooperatives and OFs and even reforming BSP rediscounting facility, and enhancing export sectors' innovative capacities in areas that include strengthened infrastructure for science, technology and innovation, tapping foreign and overseas Filipino expertise. The details of these are found in their review in Part I.2. In addition the FGD singled out another important element in the overall climate for exports. Information – real, correct, trusted, timely, reliable – has been essential to export development and this varies by size of exporters. Large enterprises may be able to sift through information overload, access more formal sources, and behave more deliberately. In contrast, smaller ones (direct and indirect exporters) and even micro-enterprises that may potentially be (indirect) exporters tend to rely on informal sources of information without sufficient validation, are apt to face misleading information and eventually transactions, unable to secure safeguards against adversities, and as a result prone to making erroneous business decisions too costly discouraging further export interests. Some of information needs for export development may be proprietary but most are formally available though scattered in different agencies and sources especially those critical for engaging in international trade and its key procedures (e.g., business registration, product testing, licenses and certificates, logistics, shipping options, market requirements, etc.). What may be needed is to have a central portal connecting these disparate sources (e.g., if these are individual web sites through hyperlinks activated via the portal) using a process flow that exports go through towards international trade. The FGD discussions indicated there are both public and private information directories but these apparently have limited reach and stakeholders end up with their own devices. Information remains a critical component in boosting international trade in goods and services particularly in the context of becoming part of GVC. An electronic portal could provide such information pool but what is more important would an information gateway that can act as both a network and a community in which validated

information quickly move. A more conducive climate for open environment not only attracts foreign investments but draws in foreign visitors in the tourism industry reinforcing the climate.

There are other factors, even more crucial, that influence the overall climate. Movements of the real exchange rates and real interest rates are of special concerns to exporters along with other macroeconomic variables e.g., foreign direct investments flows, inflation rates, and public investments. Often these have stronger effects on exports than the factors that directly impinge on them. Indeed "correct" macroeconomic policies may even be more effective than any direct intervention from both public and private sectors. And these tend to cut both ways. For instance, maintaining a market-oriented exchange rate tends to uniformly encourage exports, naturally protect and promote domestic-import-substituting industries, reduce trade deficits, and accumulate international reserves.

(2) *Exploit existing and prospective opportunities from trading arrangements following from (f) in PEDP 2015-17* – The number of existing and prospective bilateral, regional, and multilateral trading agreements the country can use to access markets seem to be growing. In the region the AEC and APEC are ripe with trade options. Bilaterally, the EFTA-PH FTA, looming EU-PH FTA, ASEAN-based bilateral trade pacts and others in the pipeline can be tapped for specific products market access. The usual special and differential treatment in multilateral trade (e.g., GSP-Plus) continues to be beneficial to the Philippines. This strategy is self-explanatory but how it is organized in order to optimize exports growth may have to be examined more carefully so that products and services are the departure points irrespective of the modality or geographic identity. The apparent successes of the DTI program on Doing Business with FTA is illustrative of how trading arrangements can be exploited which is viewed by traders, exporters, and other businesses as access points to specific markets. A dedicated program such as this can be an effective vehicle for both advocacy and promotion. Ultimately these expand market access and diversify exports products through strategic trade partnerships in the process of bilateral, regional and global integration.

Zero or preferential tariff rates for some trading partners (occasioned by agreements) are often viewed as desirable. Many of those who participated in the

FGDs expressed these routes as ways around tariff barriers. Yet what is often misunderstood is the full picture behind many of these bilateral and regional agreements i.e., these often have stringent rules-of-origin. Exporters (and trade negotiators) would need pencil-pushing to determine if the associated conditions with preferential rates give them the added profitability they would otherwise not get. There would then be a firmer basis for advancing or pushing back and exploiting opportunities from trade agreements.

(3) *Design comprehensive packages of support for selected products and services sectors following (a) and (g) in PEDP 2015-17* – Part II.4 explained the underlying reasons for focusing export targets and the selection of 3 exports products and services as focal 3 (electronics, processed food, vegetables, and beverages, and information technology and tourism services). The more essential issue is whether there is a rationale for designing a separate support package for these 3 as a focal strategy as well. After all, these 3 are already covered in the identified sources for achieving 2022 exports targets and thus are part of the first 2 strategies elaborated above. Apart from aiming for these 3 together with the rest of the exports products and services, they could very well drive the achievement of overall exports beyond the targets set for the end-plan period. In other words, what incremental strategies warrant for these 3 focus exports targets?

Across the 3 exports targets and given emerging challenges in increasing Philippine market shares partly due to disruptions from Industry and Services 4.0, these would need continuous products and services road map updates derived from deliberate and careful analysis at more disaggregated groups. For instance, the industry road map for integrated circuit design is a comprehensive analysis of the electronics industry and the options it faces in moving forward given new advances in technology and demand. But the basic policy issue for the industry (still dominated by semiconductors) remains to be further considered, debated, and decided whether towards the direction of a vertical approach (so-called IDM covering the string of IC design, wafer fabrication, and assembly and test) or design only approach. Whichever direction this sector eventually takes has implications on strengthening networks (e.g., with international foundries), investments, and training a cadre of capable technicians, among others. For processed food, vegetables, and beverages, a focus on them requires examining close fit with GVC, the domestic soft infrastructure needed, and various

collaborations and networks that would form their parts and parcels. While there are existing value chain analysis for some of the sub-products, a more integrated road map is necessary. With the IT-BPO composed of varying services, it appears to be more vulnerable to shocks than originally thought. Part of the sector such as telecommunications and computer services may have differing responses to shocks which need to be understood for appropriate adjustments. It appears that the most immediate shock comes from developments in Services 4.0 affecting BPO raising a distinct possibility of “re-shoring” these services to their originating countries. The fast pace of AI further adds more potential changes in related services such as tourism services (as noted in II.3). A package of support to IT-BPO would consist of a platform for systematic research and analysis of technology trends in the sector organized jointly by government, academe, and private sector (e.g., BPO association), seed training for “human teachers” as part of AI adjustments, and access to associated capital needs for start-ups, among others. In this context the country’s tourism industry may have a more *avant garde* agenda for Services 4.0 aside from traditional synergies with other industries in promoting exports associated with attracting foreign visitors to the country’s tourist destinations.

Without a pro-active design of such comprehensive packages for focus exports targets, these would be under the broad umbrella of Strategy (1) which can be considered “business-as-usual” efforts despite modifications in their relative emphases among the 5 components. These illustrative additive designs give the 3 focal targets affirmative action. The ultimate goal is to place these exports targets ahead of the curve as Industry and Services 4.0 takes a firmer hold on the patterns of trade along with their underlying investments and technologies.

An agenda to rev up the country for Industry and Services 4.0 is summarized in III.4 highlighting 4 areas which qualify as strategies to pursue. What is important to point out is that at least half of them easily fall in the 3 strategies enumerated here. Nuances in Industry and Services 4.0 suggest special attention to them. For example, it is necessary to build up a strong atmosphere for “start-ups” as a way to encourage innovations in industry and services noting that countries with favorable conditions for them attract many bold entrepreneurs; to promote, if not actually institute incentives, for venture capital and investments into risky but promising initiatives while fully aware of the high

rate of failure in many of them; to bring to bear on many of the enablers and their applications the appropriate regulatory framework to ensure that consumer safety and protection will always be of primordial government responsibility without necessarily stifling the applications. Indeed it would probably make sense to launch an advocacy program to gear up for Industry and Services 4.0.

In Part I.2 reviewing the strategy implementation of PEDP 2015-17, MC 91 directed 14 government agencies to collectively work "...to facilitate exports and eliminate those that hamper its [their] free flows..." without defining in more specific terms the role that each of the agencies were expected to play in carrying out the PEDP. The same MC directed that "...the EDC shall oversee the implementation of the PEDP and coordinate the formulation and implementation of policy reforms and promotion *strategies*..." (Emphasis added). What these mean in MC 91 and reviewed earlier is that the burden of the strategies implementation was primarily with the agencies identified in the PEDP 2015-17.

In anticipation of PEDP 2018-22, MC 27 was issued on October 6, 2017 directing concerned government agencies to "...collectively work, review, institute reforms, and implement all relevant policies in harmony with the PEDP and the Philippine Development Plan to boost export growth..." This new MC significantly differs from the previous MC 91 in many respects. MC 27 now explicitly connects PEDP with PDP further supporting their closer synchronization and strengthening time frames and targets. MC 91 specifically referred to PEDP 2015-17 in terms of approval of the Plan and the underlying directive to identified government agencies whereas MC 27 does not indicate an approval (of the PEDP 2018-22 under preparation) but rather stating that succeeding PEDPs "...shall be crafted..." MC 27 increases the number of concerned agencies from 14 to 18 with the addition of 3 new agencies (Department of Tourism, Technical Education and Skills Development Authority, Commission on Higher Education) and one resulting from the split of DOTC into Department of Transportation and Department of Information and Communications Technology the latter being the 4<sup>th</sup> added (new) agency. MC 27 specifies the roles and functions of these 18 agencies towards increasing the exports of goods and services.

The inclusion of the Department of Tourism in the EDC fits quite well with an IT-BPM and Tourism Services as part of the focus on 3 exports of goods and services. This allows better coordination once specific strategies are crafted.



Both MC 91 and MC 27 identify the concerned government agencies involved in PEDP but leave it to the EDC to oversee the implementation. This means the agencies MC 27 directs to be part of the PEDP need to be organized in ways that would effectively apply the strategies enumerated here to achieve the targets set in PEDP 2018-22. Where there are roles for the private sector, technical and research institutions, and academe, they will likewise need to be embedded in how the various actors in the strategies are to be organized. Since the EDC (under RA 7844) includes representatives from the private sector as members of the Council, any organization for PEDP strategy implementation can be readily arranged.

The strategies identified for PEDP 2018-22 are suggested to be consolidated in order to optimize some of the interactions among them, ensure better coordination, and even pool limited agency resources. More than this is a more efficient handle for the EDC to keep track of the strategy implementation. Separate but related organizational modalities may have to be formulated for the focus exports targets. Once the organizational issues are sorted out an equally effective monitoring and evaluation process needs to go into effect following the path to achieving the targets for goods and services exports.

#### *IV.3 Cross-Country Comparative Strategies*

The collective strategies laid out above (which aggregate from the individual strategies adopted in PEDP 2015-17) are intended to achieve the targets set for PEDP 2018-22. But as pointed out elsewhere (and summarized in Part V below) the other exporting economies in Asia which had equally suffered slowdowns are expected to equally plan for recovering lost exports and aim for increased targets as well. Each of these is likely to deploy strategies that underlie their plans. Would the PEDP 2018-22 strategies be comparable to others?

The strategies identified for PEDP 2018-22 are obviously not unique to the Philippines – all the 8 individual and their 3 collective strategies have also been adopted by all exporting economies. It is their relative emphases, sustainability, and consistency which may have differed. Given the difficulties if not impracticality of actually comparing export plans, an alternative would be to review how past export performances of other countries related to the strategies they had pursued.

The early export powerhouses exemplified by the Asian tigers (Hong Kong, Singapore, South Korea and Taiwan) presumably did not employ the second strategy “exploit opportunities...from trading arrangements...” i.e., the emergence of FTA’s and regional groupings. They exploited the multilateral trading system and its various special and differential treatments. The recently emerging economies of ASEAN however fit more to the array of strategies identified above. Among these are Malaysia, Thailand, Indonesia, and Viet Nam which have seen surges in their exports. Those starting to pick up include Cambodia, Myanmar, and Lao PDR.

What is important to note in comparisons of strategies is that these can also be considered “inputs” (aside from the physical inputs into production) to achieve some conditions which in turn increase outputs, “exports”. Thus while comparisons of export performances are final results they do not reveal the underlying (intermediate) outcomes of strategies. Indeed when all of the elements in *Strategy 1* are pursued, they change the setting for exporters and traders. Openness induces linkages essential for trade – when sustained over time leads to integration. This setting together with a cadre of entrepreneurship stimulates exports. Viet Nam’s *doi moi* was recognition that the country did not have the knowledge, own the technology, and possess the capital to produce products for international markets. But the openness combined with nascent endowments led to market access. Based on the analysis in PEDP 2015-17, Viet Nam’s Trade Openness Index is almost 3 times that of the Philippines. In fact not only has its exports been growing, its imports have likewise been growing (though at slightly lower pace). Growth rates of exports have fluctuated as much as those of imports growth – but in 8 of 12-year period, exports have grown faster than imports. Comparable Philippine fluctuations show that only in 3 of 12-year period have exports grown faster than imports. Stable and consistent openness attracts foreign investments to strengthen the value chains that connect the country to the rest of the world sustaining further exports growth. It is true that the underlying political and social milieu matters but the results of openness rely more on global markets which are independent.

*Strategy 2* shifts the burden of market access from the broad global economy to specific products and markets. This means moving beyond the dominant market destinations, which presumably are partly self-driven, to new



markets which require country and product introduction, setting up of information system, and development of market intelligence. Viet Nam's trade offices are seen to pave the way to potential markets. In order to promote seafood exports to Australia, establishing a trade office allowed the country to learn of import nuances that needed to be transmitted to exporters especially as these concerned more of sanitary and phyto-sanitary regulations than general restrictions of tariffs. As the Viet Nam-Eurasia Economic Union FTA came into force a legal basis had to be set up for exporters to access the market under more liberalized regime.

A tactical focus on products for which the country has the necessary factor endowment and supplies is what is behind *Strategy 3*. As these markets expand there would be some tweaks to the focus ensuring that production will continue to respond to demand by exploring alternative supply sources, varying production and distribution. As Viet Nam began to experience an accelerating demand for its coffee products and supply constraints started to threaten market shares (after becoming the second world supply), it shifted its focus on supply extensions in Lao PDR through networks, direct investments, collaboration, and distribution arrangements.

These illustrative experiences in Viet Nam's pursuit of similar strategies indicate their relative success in comparative context. The strategies do lead to intermediate outcomes and achievement of export targets. Both stability and consistency in the strategy implementation are critical to its contribution in an export development plan.

#### *IV.4 Strategy Implementation Cost*

In determining the costs of implementing the strategies for PEDP 2018-22 several points need to be considered. First, some of the underlying specific strategies are activities or functions that are inherent in the public agencies involved – they continue to be undertaken with or without a PEDP. These include functions involved in regulatory impediments associated with goods movements or services delivery, programs to raise productivity, access to financing windows, activities that raise products and services qualities and standards, and actions that promote innovations. There are public and private organizations that undertake

these as part of regular functions. Efforts made to address a second and a third strategy – opportunities from trading arrangements and package of support for selected products and services – may require incremental resources.

When a strategy calls for targeting specific markets and products there will have to be associated costs – from developing programs to funding missions, participation by exporters in particular trade fairs and shows, seed resources for new products, and so on – these may not be incremental but incurring significant outlays beyond those that are regularly provided. Since private sectors would be heavily involved in such ventures their costs could either be solely undertaken by the individual enterprises based on profit calculations or jointly underwritten by public and private entities involved. This seems to be a common practice in other exporting economies. How this will be decided in terms of mission objectives, targeted products and markets, scope of activities and results evaluation needs to be laid out.

The overarching strategy of the macroeconomic environment – policies that enhance the climate for exports – do not really involve direct layouts but derive from a strong commitment to support export development. Indeed for most of the economies that became export powerhouses the initial surge of exports was associated with a more trade-friendly and export generating climate. Thereafter specific targeted products and markets were followed requiring additional if not new resources and costs. For example, after sustained exports achieved by Viet Nam, promotions went overdrive to support more missions and trade encounters between the country's entrepreneurs and international buyers. In 2017 the Ministry of Industry and Trade (MOIT) allocated USD 3.96 Million (PHP 200 Million) for 199 projects that included support to some 6,000 enterprises to engage in trade fairs and some missions abroad.

It is difficult to undertake any comparison between the Philippines and other countries regarding the costs of implementing strategies aside from an overall environment focus i.e. Strategy 1 above. For one, budget comparisons would be fraught with problems – for example Viet Nam state budget for the MOIT is for an agency that cannot easily be compared to DTI: MOIT has 30 departments, 32 universities, 11 groups/state corporations. For another it would be difficult to separate out budgets specifically for exports unless there is a special outlay as indicated above and reported by MOIT.

In PEDP 2015-17 a special budget request and cost for an export development fund amounted to PHP 1.76 Billion over the period of its implementation. Following on Viet Nam's allocation of PHP 200 Million in 1 year for export promotion a replication of the budget for the previous PEDP would seem to be appropriate and comparable. This means an incremental outlay of PHP 1.5 Billion for 2 of the 3 strategies (Strategy 2 and Strategy 3) implying a higher overall cost once the individual agencies' budgets imputed into export development are included. This would even be more when the private sector contribution is added reflected in its significant presence in the Export Development Council under RA 7844. Indeed the incremental outlay would form part of the underlying public-private-partnership in export promotion and development as this becomes a leverage for drawing in larger private sector commitments such as its counterpart in promotions (e.g., missions, trade fairs, research, etc.) to the implementation of PEDP 2018-22.

#### *IV.5 Advocacy and Communications*

Article I, Section 2 of RA 7844 clearly states, "...the government and the private sector shall jointly transform the Philippines into an exporting nation. The State shall instill in the Filipino people that exporting is not just a sectoral concern but the key to national survival and the means through which the economic goals of increased employment and enhanced incomes can most expeditiously achieved..." What this means is a strong advocacy for and communication on Philippine trade in general and PEDP 2018-22 in particular. This will require a separate accompanying advocacy and communications plan.

Given what RA 7844 mandates, such a plan aims for a continued, sustained, and visible advocacy and communications. The messages of PEDP and of all the elements that compose it ought to be regular, regional (and beyond), and sectoral. While a sporadic event or events may provide some track (e.g., Exporters Congress) it seems to be insufficient relative to the seeming responsibility enunciated by RA 7844. One can even add the drawing in of the country's thinkers, opinion makers, and newspaper columnists. But the content may also have to be more diversified than a focus only on PEDP. It involves expounding on markets and products, new technologies and production techniques, government actions on regulatory and policy announcements and procedures, conduct of



information and technical "clinics" to entrepreneurs, manufacturers, and traders. Only with advocacy coupled with actual trade-friendly environment will the mandate be further achieved.

## V. PEDP 2018-22 Summary of Challenges and Risks

The first 4 parts of this Plan laid out how the targets for exports in the PDP are to be achieved, what would compose it, the possible foci in terms of products to pursue, the various strategies to be employed in attaining them, and how they compare with other countries' implementation and costs. In the discussions throughout the Plan the implied challenges and risks are raised in its context. This part consolidates and summarizes those into (1) riskier global trade, (2) policy retreats in major markets, (3) constraints to regional and multilateral arrangements, and (4) technological breakthroughs.

### V.1 Riskier Global Trade

Part I.3 recounted that after a peak growth in Philippine exports in 2014, the next 2 years saw declines. This was also the character of growth and thus trade for most of the trading world particularly the US, EU, and China (the country's major markets). However recovery started in 2017. It now turns out that that recovery has sustained across the broad base of the trading world. The World Economic Outlook January 2018 update indicates a firmer and strengthened global recovery for the near term (2018 and 2019) – the earlier 2017 forecasts have been upgraded by 0.1 percentage points for 2017 and 0.2 percentage points for the 2 years into 2018 and 2019. The broad-based growth appears to be similar across the different regions – the EU Area, emerging and developing Europe (driven by dynamism in Turkey and Poland), Latin America, East Asia (including Japan and China), emerging and developing Asia, and Africa. These seem to be the pattern for the medium-term though some slowdown towards 2022 is expected coming from fiscal adjustments in the US (arising from tax policy changes and rise in deficits).

Against the seeming robust and sustainable recovery in the mid-terms and their carry-over into 2022 are anticipated corrections in the financial sectors, threats from some inflation (stable but higher oil prices), and increased financial susceptibility as the period of low interest rates and investor exposures to low-rated borrowers and riskier household debtors come to end. In consequence these may translate into higher costs for exporting indicating a need for these countries including the Philippines to recognize the necessary adjustments especially in terms of increasing productivities. As all other countries expand their

markets to exploit sustained recoveries and growth, trade dynamism becomes an important guide that the gains that have been achieved (reflected in the changing trade maps) are preserved in the medium-term. There is no doubt that the economies that suffered exports setbacks in 2016 (Table 1.2) are gearing up their export plans and strategies to restore their lost revenues and build buffer earnings.

Another risk to the expected expansion of trade would be the attraction for inward-looking policies as trading countries' external imbalances combined with skewed growth benefits generate calls for erecting trade barriers, exemplified by the US, which eventually spreads as either trade retaliation takes place or further protection imposed. It is quite clear that this kind of policy behavior and risk lead to reduction in trade and economic growth. Moreover such inward-looking tendencies diminish potentially larger output that results from trade.

In all, the period between 2017 and 2022 appears to be more accommodating of trade at least relative to the previous 3 years. A sustained recovery seems to be firmly in place across the wide swath of trading economies. And those exporting are poised to capitalize on that recovery, planning to recover lost earnings and gain further revenues. How to strike it given the underlying opportunities is the looming challenge faced not only by the Philippines but many others. Having done no worse than others in the fallout from the previous planning period the relevant task is to ensure that in the path to recovery the country can do better than many others. On the other hand the risks, though formidable, are seen to appear farther into the horizon – until the end of the PDP planning period – and provide a cushion not only to hit the targets but exceed them. What makes this recovery, despite being forecast to be firm, riskier is that all those economies in Table 1.2 would be scrambling to raise exports, sharpen their strategies, and carry out policies that may be interactive among those trading. Growing markets however can accommodate more exports though they would be less intense had the recent fallouts been more isolated.

## V.2 *Policy Retreats in Major Markets*

While the aggregate trend seems to augur well for trade, some of the major markets for Philippine exports may face policy uncertainties though more towards retreats from previous directions. It is important to note however that a number



of these have been brewing at the same time that recovery was taking place so that it can be argued that the global trend described above had taken them into account.

Based on trade shares, some of the imminent policy retreats would appear to have only marginal impacts on Philippine trade. But given the growing interdependence among markets there may always be interactions with the country's major markets and thus a risk as well. It is useful to recognize larger policy retreats as reference in assessing risks.

The United Kingdom, a minor weight (but not insignificant being number 20 of exports markets in 2017) to Philippine exports, is in a critical path in its exit from the EU. How its markets will play out in the negotiations remains to be seen. It appears that the UK does not consider a slowdown in its trade as the traditional EU markets tamp down. Displacements of EU markets will likely occur and, depending on the products menu, the Philippines could benefit directly. The interdependence of global markets however may also result in some indirect trade as new sources for UK trade expand which in turn could affect exports from other countries including the Philippines.

A similar policy retreat is looming on the North America Free Trade Agreement (NAFTA) coming from several sides. The US administration's warning to cancel NAFTA unless re-negotiated to benefit more the US, the continuing negotiations in more difficult areas such as domestic content of auto production, arbitration procedures, and new sectors such as telecoms and digital commerce are among the policy issues hounding NAFTA. Although there appears to have some success in the recent 7<sup>th</sup> Round of NAFTA the more serious threat of cancellation looms larger in NAFTA.

There is creeping nationalism among major markets fanned by dissatisfaction with skewed trade benefits and the possibility of changes in government as some crucial elections hover in 2018 for which policy retreat may be enticing. For example elections that are forthcoming in 2018 include those in Italy, Mexico, Brazil, and Colombia among others with each one having candidates with differing perspectives than currently, or as in Mexico the prospect of postponing any negotiations until a new government is installed. In either case, trade risks increase. Creeping nationalism would be manifested in setting up

protectionist barriers and inward-looking policies both of which give preference to domestic industries and domestic markets. The current US government epitomizes this kind of nationalism masked in such a theme as “make America great again” (MAGA), engaging in a trade war (through retaliatory tariffs), and scuttling existing treaties. And for as long as the political administration is in power, such direction is inevitable and may last until a new government comes in. The Philippines may or may not benefit from such policy retreat in major markets. What is clear is that to the extent that growth suffers from trade policy retreats there will be repercussions on other trading partners. Both the US and China rank 2<sup>nd</sup> and 4<sup>th</sup> in export destinations, respectively, for the Philippines in 2017. Any trade policy retreat may not directly affect the Philippines but certainly indirectly as their growth suffers in the medium term.

There would also be implicit policy retreats from existing reforms as their initial impacts wear off with their consequences needing retreats, or the reforms are unable to achieve their timely impacts necessitating retreats. It has already been noted that the recent US tax reforms have seen some initial spurt sparking up trade but that as the US deficit escalates some retreat is bound to happen though perhaps in the near-term

### *V.3 Constraints to Regional and Multilateral Arrangements*

The increasing number of bilateral and regional trading arrangements in the last several years has also increased the participating economies' reliance on their provisions as departure points for trade expansion. Where there are hitches to their negotiation or implementation, trade is likely to be at some risk and be affected.

One of these is the drag in the progress of regional trading arrangements. There is the Regional Comprehensive Economic Partnership Agreement (RCEP) which remains to be completed either by ensuring that all members are fully on-board or that no mixed messages are given for trade transactions. The salvaging of the Trans Pacific Partnership Agreement (TPP) after the US withdrawal, while laudable, also needs to be firmly validated and given impetus for implementation. After the inauguration of the ASEAN Economic Community (AEC) in 2016, there is yet to emerge trade breakthroughs commensurate to the fanfare that went with it. On the other hand, even within existing regional arrangements there may be

provisions that have to be fully carried out especially those that concretely support trade transactions. For example, the Philippines has to fully comply with commitments to the ASEAN Harmonized Electrical and Electronic Regulatory Regime (AHEER) through post-market surveillance that essentially provides equal footing among ASEAN members on trade in these products. These, among others, pose serious risks to the country's quest for increasing trade in goods (and services).

Another is a weak global value chain linking the country to the rest of the world in merchandise trade. It is not only efficiency gains that go with seamless links to global value chains but the integral acquisition of new technologies and best practices obviating the need for their independent pursuit. Where there would be barriers and hurdles in the country's integration it is not only trade that suffers but subsequent economic growth and rising prosperity. While it is important to recognize some of their apparent inequitable distributional effects they should be addressed as separate policy issues. It can also be argued that weak global value chain is not really a trade risk since it does not necessarily reduce existing trade and its contemporary behavior. But in a highly globalized world, it is evident that higher trade volumes are potentially forgone with weak global value chain.

Some sporadic tariff increases in major markets are to be expected especially as global trade recovers and uneven outcomes. When tariff increases however are viewed to be winnable by those which impose them, they become real risks with wider repercussions. They come from the more likely responses to their impositions – noted above – as retaliatory tariffs. The distinction then between creeping nationalism and sporadic tariffs becomes blurred and in the end everyone loses, nobody gains, and trade risks only escalates affecting other sectors of the economy and the larger macroeconomic environment.

Finally, delays in implementation of existing bilateral, regional, and multilateral trading arrangements or of potentially new ones create further risks in an export development plan. Both existing and potential bilateral trade arrangements especially towards free-trade-agreements (FTA) tend to entail risks that could otherwise increase trade. The bilateral FTA between the Philippines and the EU need further push to send a clear message for more trade given the early stages of its scoping and definition. A proposed FTA with the US and separate FTA with China (aside from the ASEAN-China FTA) would address trade



expansion among the country's major trading partners. On the other hand, greater country participation in arriving at new multilateral trading agreement under WTO auspices clearly complements the need for further market and product diversification. Delays in these pose some significant risks to trade.

#### *V.4 Technological Breakthroughs*

The break-neck speed of technological advances in the last few decades, in many ways, poses serious trade risks and challenges in the form of how the country is going to face them. Recent technology enablers are getting into sectors, industries, enterprises, and products that are globally traded which affects the Philippines. Some technology enablers tend to have more significant effects on and challenges to international trade than others.

Part III of PEDP 2018-22 gives a detailed summary of these technological breakthroughs and how these have impinged on the manufacturing and services sectors which are the bases for much of their international transactions. Common across them is the use and combinations of digital technologies in the manufacture and delivery of goods and services. As pointed out through illustrations in industry and services, they pose challenges to trading countries as they adjust to the more widespread technological breakthroughs.

In fact, several of the countries, excluding the Philippines, challenged by these breakthroughs have responded with considerable visibility at the highest levels. These range from systematically setting up dedicated programs and projects (e.g., Thailand 4.0, South Korea's Smart Factory Division, Singapore's Smart Industry Readiness Index), or more visible warning from the country's leadership on the approaching industry 4.0 (exemplified by the Indonesia President Joko Widodo call to meet the challenges of these technological breakthroughs). As these ramp-up international trade through their applications in industry and services, it may be necessary to raise their visibility for the Philippine industry and services to become more aware and prepare for necessary adjustments.

The challenges from technological breakthroughs arise due to their potential and actual disruptions to industry and services orthodoxy. In manufacturing, technological breakthroughs are threatening traditional practices

of factory automation and mass production to achieve economies of scale and lower costs of production with mass customization made possible by 3-D printing, smart supply chains through the Internet of Things, and batch production instead of assembly-line. A number of manufacturing industries that export or are potentially exportable such as wood manufactures, garments, vehicle parts, vehicle assembly, and machinery, among others are experiencing significant changes in their production processes.

In services, technological breakthroughs manifested in increased use of robots and artificial intelligence (AI) embraces a wide swath of services that include those which are internationally traded. Both tend to replace repetitive and predictable functions. Internationally traded services which can be delivered electronically and are impersonal are candidates for substitution by machines especially in the context of declining machine prices. The evolution of many services trade that was initially triggered by the advent of the Internet is effectively going through another evolution when human labor services are replaced by machines. A number of services that are currently sources of major employment given low labor costs in developing countries including the Philippines such as business process outsourcing, telecommunications, and financial services, among others, are apt to be affected.

As "best practices" change with technological breakthroughs the challenge to industry and services trade becomes more compelling. A number of the affected industries and services would be "locked in" with existing practices. It appears that these changes are inevitable outcomes in the nearer term than anticipated. It therefore becomes necessary to gear policies and programs that aim for a smooth transition.

## VI. Concluding Remarks

Part II.3 gave a summary assessment of the PDP export targets' feasibility and how these are to be met in the PEDP 2018-22 with the range of goods and services components in trade. The array of goods and services that are identified as sources for these targets is seen to have annual growth rates that are feasible given recent historical experience. When coupled with the changes in the trade map for goods and for services between the period 2006-13 and 2013-16 which have improved, their feasibility seems to be more assuring. By way of concluding remarks a comparison in the approaches to PEDP 2015-17 and PEDP 2018-22 is given before some final points in enhancing the Plan.

### VI.1 Comparative Approaches to PEDP

A rigorous review of the structure of Philippine exports laid the foundation for crafting the predecessor PEDP 2015-17. Their behavioral roots were carefully analyzed using various measures – market shares, comparative advantage, diversification, competitiveness, and trade map – to understand the structural problems of why the country's export performance, historically and contemporaneously, has been erratic and less than what to expect. Comparisons with other ASEAN countries' exports bare out the results of the analysis showing the Philippines poorly against the rest in the region in most of the measures used. The 3-year Plan drawn up for the remainder of the Medium-Term Philippine Development Plan could not realistically aim for exports too ambitious for the country's experience and performance. Yet external trade was shown to deliver important impacts on the economy – in particular on its ability to create jobs and employment. The Plan estimated the magnitude of employment generation based on the export structure using its stable (direct and indirect) multipliers. Those behavioral "coefficients" continue to remain relevant beyond PEDP 2015-17 since the underlying structure (based on a constant input-output table) has not and is unlikely to dramatically change. The analysis averred that the country's menu of exports and their structure would remain the same during the 3-year rolling plan. A subsequent rolling plan is therefore seen to have a similar pattern with exports growing defined in greater part by international market trends.

The approach in PEDP 2018-22 takes the actual exports earnings (at least in 2016 and the first 3 quarters of 2017) associated with the predecessor PEDP and

begin a new Plan. Instead of generating targets partly following a rigorously-based analysis, it takes the given targets and determines if these are feasible using the actual 2016 exports as baseline. Recent historical growth experience indicates they are feasible; PEDP 2018-22 identifies the sources of goods and services that achieve the targets. And in order to align the Plan with the PDP, it has taken a 5-year time frame to catch up with the 6-year PDP (which started in 2017). What this means is that a longer time frame than the 3-year (short-term) rolling plan under the Export Development Act needs to consider potential changes in the broad environment for trade. It is in this context that PEDP 2018-22 scrutinizes how the accelerating pace of Industry and Services 4.0 may impinge the path towards achieving the exports targets. Whether it does or not, it is important to examine its relevance beyond the 5-year time frame and the implications for the longer vision expressed in *Ambisyon 2040*, the industrial structure in the face of it, and how the Philippines can gear up for it. Any industrial strategy formulation may have to take into account these accelerating developments more explicitly than before since a new industrial structure, and the concomitant trade flows, could have radically different configuration.

The number of exports products and services as focus exports targets in PEDP 2018-22 is narrowed to 3 products and services groups. Yet these are not homogenous – indeed they contain many products and services within the broad umbrella. In the PEDP 2015-17 the products and services as focus exports numbered 10 – 6 as key exports and 4 as emerging exports (though again these encompass many within each). The 3 in PEDP 2018-22 are captured in these. A strong rationale is given for a narrower set of focus including the effects of Industry and Services 4.0 which were not prominently in the horizon during PEDP2015-17 which cannot be ignored. Moreover additive strategies are likewise essential once these focus exports targets are pursued.

The different approaches followed by PEDP 2015-17 and PEDP 2018-22 are mutually reinforcing. The underlying fundamental structure of Philippine exports as rigorously analyzed in the former remains valid for the latter especially in tracing how the sources for the targets collectively reach them. Although structural characteristics seem to be stable explanations for the country's overall weak trade, its performance relative to other countries, particularly ASEAN neighbors, vary over time. For this reason, PEDP 2018-22 updates the

competitiveness trade map for the current plan. The results solidly complement the path to achieving the export targets into 2022.

The strategies laid out in PEDP 2015-17 to reach the targets in the Plan equally remain valid for PEDP 2018-22 with 2 caveats. One is the incorporation of the results from the FGD in preparing for PEDP 2018-22 where various issues and concerns had implied strategies to address them e.g., the importance of information in the evolution of exports by varying sizes of establishments. The other is the consolidation of the strategies into collective groups based on interactions among them. It is quite clear from PEDP 2015-17 that the strategies identified were inter-dependent but nevertheless to be carried out quite independently. For PEDP 2018-22 and learning from the FGD, what seems to be of primary importance in fostering exports is the overall climate for them. Thus the re-grouping into basically 3 strategies is the track. There are other results from the 4 FGDs conducted – not directly relevant for PEDP 2018-22 however it would be useful for the government in general and EDC in particular to be aware of these, expand on some of the concerns and issues raised and ensure that there would be adequate responses to them. A separate report of the FGDs provides details and possible directions for reforms including appropriate legislation

PEDP 2018-22 goes beyond the confines of its predecessor's technical boundaries and into how the strategies may be implemented. The approval of PEDP 2015-17 simultaneously came with MC 91 directing government agencies to support its implementation. But its timing at the tail end of the previous government did not allow any further deliberate planning and therefore left out. PEDP 2018-22, on the other hand comes with an early MC 27 that not only gives directives to specific agencies, but adds more of them, and indicates the role for each one in terms of support to PEDP. Thus in addition to spelling out the strategies to implement PEDP 2018-22, the Plan considers how the associated agencies responsible for specific strategies may be organized. This will allow better tracking of the progress in reaching exports targets. It would be necessary for the EDC to use MC27 to set an agenda for executing the strategies.

In sum, PEDP 2018-22 takes off from the analytical foundation of PEDP 2015-17 which remains valid investigating the structural reasons for the weak performance of Philippine exports of goods and services. It looks at an array of goods and services exports as sources for achieving the exports targets, examines



if their historical experiences give some assurance of promising exports revenues at the end of the planning period, and considers how recent developments in industry and services affect their path towards the targets achievement. Only aggregate growth rates are taken up along with updated trade maps. But more fully, behind these would be the results of the previous Plan's analytical exercises.

## *VI.2 Enhancing PEDP 2018-22*

There are several useful enhancements to the PEDP 2018-22 for consideration. One is to use some of the analytical results of PEDP 2015-17 in order to strengthen the results that the exports targets are achievable. The measures of comparative advantage for specific products would put greater confidence on the sources for achieving the targets. It is also possible to generate estimates of employment and job creation for those products identified as sources for reaching the exports targets, aggregating them and extrapolating impacts on the labor force.

A second area of enhancement is to develop a systematic monitoring and evaluation system for PEDP 2018-22 and subsequent PEDPs. Such a system will need to have measures of inputs and outputs principally and then subsequently on their impacts. While it seems straightforward to follow the progress of exports (and their distance from the targets set) through the regular statistical reports (e.g., PSA quarterly reports of exports) measuring inputs would face many challenges. On the one hand the definition and measurement of inputs have to be sorted out which may or may not lead to some solution. On the other hand to the extent that inputs can be considered as "strategies" in the context of PEDP 2018-22 this may require defining a strategy and generating indices of their implementation. The consolidation of several strategies into some collective groups – defined for example as 3 strategies in Part IV.2 – would make monitoring more tractable. Again this route is equally challenging but may have better prospect given the last enhancement (below).

Finally, a more pro-active EDC – taking off from MC 27 – where it can organize its directed membership into "strategy groups" would clearly be a visible means to monitor. Targets set for these groups feed into the monitoring system. Ascribing attribution of exports progress (from targets) to either "strategy groups" or other inputs would be the optimal challenge for PEDP 2018-22.

**Annex I.1 Trade Map Analysis of Philippine Exports I: Summary**

	2006-13	2013-16
Abaca fibers	Achiever	Underachiever
Automotive electronics	Underachiever	Underachiever
Baby carr., toys, games, and sporting goods	Achiever	Underachiever
Bananas	Champion	Achiever
Basketworks, wickerwork & otr art. of plaiting matr	Laggard	Underachiever
Canned pineapple	Achiever	Champion
Chemicals	Achiever	Underachiever
Chromium ore	Champion	Laggard
Coconut oil	Champion	Underachiever
Coffee raw, not roasted	Underachiever	Underachiever
Communication radar	Laggard	Achiever
Components/devices (semiconductors)	Laggard	Champion
Consumer electronics	Laggard	Champion
Control & instrumentation	Achiever	Champion
Copper concentrates	Champion	Laggard
Copper metal	Laggard	Laggard
Copra	Achiever	Underachiever
Copra meal/cake	Champion	Laggard
Desiccated coconut	Underachiever	Underachiever
Electronic data processing	Laggard	Champion
Electronic eqpt. & parts	Champion	Underachiever
Fish, fresh or preserved of which: shrimps & prawn	Achiever	Underachiever
Footwear	Laggard	Champion
Furnitures and fixtures	Laggard	Underachiever
Garments	Laggard	Underachiever
Gold	Underachiever	Achiever
Iron & steel	Laggard	Achiever
Logs	Achiever	Laggard
Lumber	Achiever	Underachiever
Machinery & transport equipment	Achiever	Champion
Mangoes	Underachiever	Underachiever

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	2006-13	2013-16
Medical/industrial instrumentation	Achiever	Champion
Misc. Manufactured articles, n.e.s.	Champion	Champion
Molasses	Champion	Laggard
Natural rubber	Underachiever	Laggard
Nickel	Achiever	Laggard
Non-metallic mineral manufactures	Laggard	Underachiever
Office equipment	Achiever	Champion
Other coconut product	Champion	Champion
Other electronics	Champion	Underachiever
Other forest products	Achiever	Underachiever
Other fruits and vegetables	Champion	Champion
Other manufactures	Champion	Achiever
Other mineral products	Champion	Achiever
Other sugar and products	Underachiever	Underachiever
Others	Underachiever	Achiever
Others agro-	Champion	Achiever
Petroleum products	Underachiever	Laggard
Pineapple juice	Achiever	Underachiever
Plywood	Laggard	Underachiever
Processed food and beverages	Champion	Underachiever
Rice	Champion	Achiever
Seaweeds, dried	Underachiever	Underachiever
Special transactions	Underachiever	Champion
Telecommunication	Underachiever	Champion
Textile yarns/fabrics	Laggard	Champion
Tobacco unmanufactured	Champion	Laggard
Travel goods and handbags	Champion	Champion
Veneer sheets/corestocks	Laggard	Underachiever
Wood manufactures	Achiever	Underachiever
<b>SERVICES</b>		
Personal, cultural, and recreational services	Champion	Achiever
Maintenance and repair services n.i.e.	Underachiever	Champion
Construction	Laggard	Laggard
Government goods and services n.i.e.		Achiever



	2006-13	2013-16
Financial services	Laggard	Champion
Insurance and pension services	Champion	Underachiever
Telecommunications, computer, and information services	Champion	Champion
Charges for the use of intellectual property n.i.e.	Underachiever	Champion
Transport	Achiever	Achiever
Other business services	Champion	Champion
Travel	Laggard	Underachiever