

Designing a Cluster-Based Scenario to Capture Indonesia's Demographic Dividend

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Executive Summary

Demographic transition in Indonesia does not occur simultaneously nationwide and this affects the country's efforts of capturing its demographic dividend. Disparity among regions with respect to their demographic characteristics means that a one-size fits all scenario, which treats all regions equally under one single policy, will not be effective. By employing cluster analysis method, Indonesian regencies/cities can be grouped based on their demographic similarities. This, in turn, allows for a pilot policy, as the national policy directive, to be developed for regions that share a cluster. This Policy Memo recommends the government to adopt two dimensions in its scenario to realize demographic dividend: a national policy that focuses on creating economic opportunities and governance quality to drive investment and job creation and a regional-level policy that focuses on building the quality of human resource using cluster-appropriate strategies.

A. Introduction

Demographic transition has driven a surplus of people in the productive age in the labor force compared to people of non-productive age. This situation creates an opportunity for Indonesia to achieve a jump in its economic growth. However, this comes with a challenge. The transition is not occurring simultaneously nationwide; instead, it takes place in varying degrees from region to region. The analyses of Adioetomo (2019) and Samosir (2019) confirm this. Disparity in demographic transition can be found not only at the provincial level, but also at regency/city level – each with their different population make-up.

The disparity has at least three consequences: (i) different region experiences time and effects of demographic transition differently; (ii) a one-size fits all policy will not be possible - instead, a more contextualized policy that accommodates the characteristics of every region is needed; and (iii) an effective mapping of transition that tracks every region is needed – the mapping observes demographic indicators and should inform policy-making.

B. Approach and methodology

Zuber, et al. (2017) asserts that the policy baseline needed to elevate Indonesia's potential of capturing its demographic dividend must consider at least three aspects, namely job creation, human resource development, and good governance. To translate the increasing size of the labor force into economic growth, Indonesia needs to have a strong supply and demand integration between the labor force and the labor market. The ability of the labor market in absorbing the labor force is a key factor in realizing the demographic dividend (Zuber, 2017) and investment as well as job creation scenario can only grow rapidly given attractive economic landscape and policies (Turbat, 2017). At the same time, the skills possessed by job seekers also determine the ability of the labor market to absorb labor force growth. Overall, health,

education, skills, and productivity of the labor force are imperative to realize the demographic dividend (Misra, 2017).

In order to benefit from demographic transition, this Policy Memo offers a scenario that is informed by a central level overview and regional-level clustering based on various demographic indicators. Clustering of regions by their transition phase uses the classification adopted by Adioetomo (2019) that employs the following parameters: Advanced Transition ($DR < 44.9$), In-Transition ($45 < DR < 49.9$), Pre-Transition ($50.0 < DR < 54.9$), and Unknown Time of Transition ($DR > 55$).

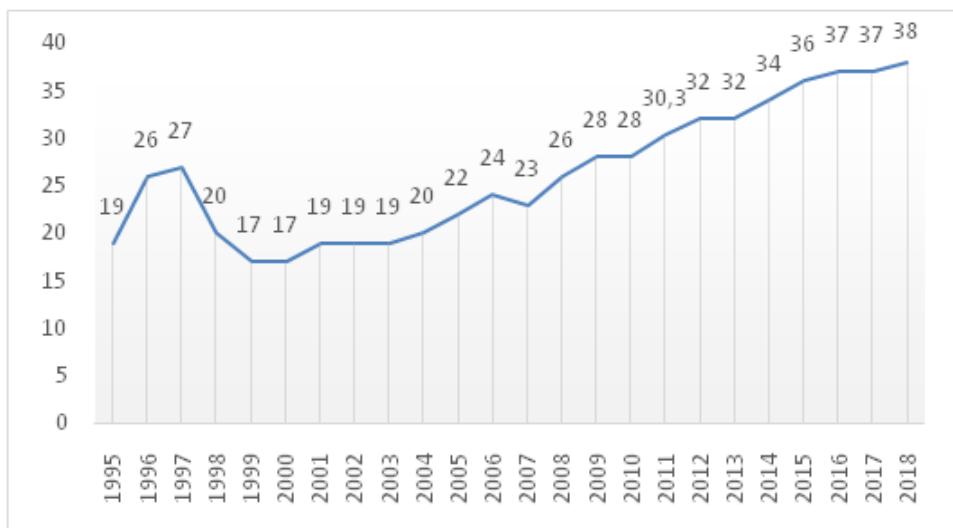
C. Strategic Issues and the Implications of National Policies to Address Them

For Indonesia to realize the economic benefits of demographic dividend, the country needs to endeavor to at least fulfill job creation indicators. Data from the Investment Coordinating Board (BKPM) shows a decline in employment from domestic investment and foreign investment in the last four years and in the second quarter: employment in the second quarter of 2015 was 370,945, 354,739 in 2016, 345,293 in 2017, and 289,843 in the second quarter of 2018. In the second quarter of 2019, the number of jobs created dropped further to 235,314 (Kontan, 2019). The low employment rate, combined with the high number and share of the productive age population, has developed into a real problem for the government as it causes the rate of unemployment to hike.

In terms of investment in education and healthcare (investment for human capital), in 2016 Indonesia ranks 131st compared to other countries (Rahayu, 2018). Indonesia's position slipped from 130th globally in 1996 (Rahayu, 2018). Similarly, the savings rate in Indonesia is considerably low. The savings rate per household reaches only 8.5% of the household's total income, or a far lower than the desired 20% savings rate of total income (Indonesia Investments, 2016).

Meanwhile, in terms of good governance, Indonesia has made great strides in corruption eradication. From being a country with the worst Corruption Perception Index in 1995, Indonesia jumped to 89th out of 180 countries in 2018. This was a vital achievement, since good governance attracts investment, which in turn may drive job creation.

[Chart 1. Indonesia's CPI]



Strategic Issues at the Regional Level

The result of cluster analysis method showed a divide in demographic quality despite similar Dependency Ratio (DR). Some regions experience a late stage of demographic dividend and low total fertility rate (TFR), while others lag behind with noticeable levels of poverty and low human capital quality. Other important issues are associated with the elderly and women in populations where demographic transition is underway (particularly in Cluster 3), as there are indications that the lack of women's participation has affected the cluster's high TFR.

Table 1. Regency/City's Stage of Demographic Transition /Advanced and in-Transition Regencies/Cities

	Advanced Transition*		In-Transition**		
	Cluster 1	Cluster 2	Cluster 1	Cluster 2	Cluster 3
Number Regencies/Cities	86 Reg./Cities (91.5%)	8 Reg./Cities (8.5%)	72 Reg./Cities (60.5%)	41 Reg./Cities (34.5%)	6 Reg./Cities (5%)
DR	41.85	41.22	48.14	46.97	48.35
TFR	2.03	2.51	2.40	2.08	2.76
CPR	59.73	32.45	64.89	65.95	20.60
mCPR	58.35	24.05	64.08	65.04	9.30
HDI	74.88	57.57	67.62	69.01	47.01
GDI	92.66	79.01	88.95	91.13	75.42
Poor (%)	8.02	29.45	10.55	11.38	38.99
Age <15 (%)	24.75	33.08	28.40	23.46	31.87
Age 15-64 (%)	70.48	67.71	67.48	67.99	67.40
Age 65+ (%)	4.77	1.51	3.98	8.56	0.72

Average Silhouette: 0.7 (Good)*, 0.5 (Good)**

Urgent demographic issues to address include poverty level and Human Development Index (HDI) that are below the national average. High poverty level, for one, would affect other demographic parameters – especially the parameters that are associated with human capital, such as health and education.

Table 2. Regency/City's Stage of Demographic Transition / Pre-Transition/Absence of Signs of Transition

	Pre-Transition*		No Known Signs of Transition**	
	Cluster 1	Cluster 2	Cluster 1	Cluster 2
Number Regencies/Cities	76 Reg./Cities (53.9%)	65 Reg./Cities (46.1%)	75 Reg./Cities (50.7%)	73 Reg./Cities (49.3%)
DR	51.31	53.27	58.38	68.59
TFR	2.41	2.64	2.75	3.36
CPR	67.67	53.94	57.79	41.15
mCPR	67.04	52.83	56.75	39.52
HDI	66.13	66.39	66.62	61.18
GDI	89.02	88.92	90.27	87.47
Poor (%)	12.98	13.34	12.40	21.25
Age <15 (%)	28.23	30.73	32.20	36.82
Age 15-64 (%)	66.09	65.23	63.13	59.19
Age 65+ (%)	5.59	4.03	4.66	3.99

Average Silhouette: 0.7 (Fair)*, 0.5 (Fair)**

D. Recommendations

1. At the national level, the government needs to drive as much job creation as possible by drafting regulations that would attract investments whilst upholding good governance. This is particularly important if Indonesia is to keep up with the growth of its labor force.
2. Regulations that promote investments and industry development must strive to create equitable benefits. The growth of productive clusters in certain regions may increase conflict potential, especially when combined with economic dissatisfaction.
3. In Advanced Transition clusters, the government needs to anticipate the decline of TFR to below the replacement level of 2.1; the government can pursue alternative strategies to strengthen the family as an institution that sustains a social environment that is conducive to family formation.
4. The elderly population issue in an Advanced Transition cluster (Cluster 1) needs to be anticipated with three alternative scenarios: the development of services and retirement protection schemes, the extension of productive period by changing existing retirement schemes, and the strengthening of economic sectors that can accommodate older workers (e.g. agriculture and plantation). It is also important to create investment schemes to capture the potential of the second demographic dividend.
5. Poverty and low education attainment among women in the In-Transition cluster (Cluster 3) need to be immediately addressed. By giving women better education and career opportunities, TFR can be reduced and improved.
6. The government needs to strengthen its education policies, especially for Cluster 2 of Advanced Transition and Cluster 3 of In-Transition stages.

7. The government needs to strengthen its social protection and poverty eradication schemes, especially in Pre-Transition regions and regions where demographic transition is yet to occur.

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