Journal of Asian Economics 29 (2013) 62–79

Contents lists available at ScienceDirect

Journal of Asian Economics

Sources of spatial welfare disparities in Indonesia: Household endowments or returns?

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ARTICLE INFO

Article history:
Received 31 October 2012
Received in revised form 12 August 2013
Accepted 22 August 2013
Available online 31 August 2013

JEL classification:
D31
I30
O12
O53
R0

Keywords:
Indonesia
Geographic disparities
Welfare
Fiscal expenditures

ABSTRACT

This article investigates (i) the extent to which the differences in the standard of living among districts in Indonesia are due to differences in the marginal welfare gains (returns) associated with household mobile endowments or differences in household endowments themselves; and (ii) whether the current allocation of fiscal expenditures by the central authorities is related to the main determinants of the spatial disparities in welfare among districts. Differences in the returns to household mobile characteristics are found to be the primary explanation of the welfare differences. The allocation of fiscal transfers to districts is found to be based on "needs" defined as low returns to household mobile endowments. This also suggests that the design of the fiscal transfer system is consistent with promoting the opportunities for welfare across districts as opposed to equalizing the level of welfare itself. Finally, the marginal welfare gains of most household mobile endowments are found to be higher in districts with more roads.

1. Introduction

In spite of the general decline of Indonesia's poverty rate over the last decade, the regional dimension of inequality and the extent to which growth is sufficient for reductions in inequalities continues to be at the center of policy in Indonesia. Policy makers have been taking steps to address the regional inequalities in their country for decades. However, over the last ten years the central authorities have become increasingly concerned with the decentralization of administrative, fiscal, and political decision-making to the 471 districts in the country. At the core of these concerns lie the inevitable trade-offs associated with the promotion of regional equity and overall economic efficiency.

Among the variety of programs used to address regional inequalities, some are targeted toward poor regions, while others are targeted directly toward poor people. This dichotomy reflects a general lack of consensus on how to deal with differences in the standard of living between regions (leading and lagging regions) and within regions (urban vs. rural areas within a given region). The lack of consensus on these two policy strategies in Indonesia, as well as in many other countries such as Brazil and China, can be attributed to two contrasting perspectives about the determinants of spatial differences in welfare: concentration vs. geography.

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1049-0078/$ – see front matter
http://dx.doi.org/10.1016/j.asieco.2013.08.004

The "concentration" hypothesis posits that a given area is poor because of the concentration of individuals with personal attributes that inhibit growth (e.g., low education). According to this view, individuals with identical attributes will have the same growth prospects, independent of where they live. Income differentials between regions will drive migration, which will, holding all else equal, reduce any wage premium associated with living in a region where labor is relatively scarce. The policy focus that then emerges centers on enhancing a person's individual characteristics (such as education and health) and improves their ability to make a better living. Conditional cash transfer programs – such as *PKH* (*Program Keluarga Harapan*) in Indonesia, *Oportunidades* in Mexico, *Bolsa Familia* in Brazil, and *Familias en Acción* in Colombia among others – are good examples of this policy focus.

The "geography" hypothesis suggests that the primary cause of poverty and weak growth in living standards over time is low returns to individuals in different geographic locations. In areas better endowed with local public goods, such as infrastructure and other basic services (electricity, water and sanitation), productivity levels and economic returns to the population tend to be higher, thus facilitating the exit of poor households from poverty. According to this view, if there are two individuals with identical attributes, the one living in an area with a lower endowment of public goods is more likely to face economic stagnation and poverty. Policies that emerge from this perspective focus on poor regions by investing in communication networks, improving public infrastructure and other basic services, and developing institutions that improve local governance and build social capital.

In reality, of course, both of these hypotheses play a role in the observed differences in welfare across space. Ex ante, the human capital theory of migration would predict that the concentration effect is the primary explanation for the differences in welfare across regions, since migration is expected to equalize returns to a given set of observable characteristics across regions within a country. However, the role of migration in equalizing returns may be limited by a number of factors such as the monetary and psychic costs of migration (the means of transportation, the disruption of social ties and cultural values), and the uncertainty of its benefits (the low probability of getting a high paying job or the risk of unemployment).

Another important factor is the presence of agglomeration economies, which were brought to prominence by new theories in economic geography (e.g., Krugman, 1991). "Agglomeration economies" summarize all the external economies of scale that arise from economic interactions between producers located next to each other in selected areas or regions of a country. These include the benefits of localization (being near other producers of the same commodity or service) and urbanization (being close to other producers of a wide range of commodities and services). In the presence of agglomeration economies, the size of the market grows in the destination region as labor migrates in response to an initial wage differential. As a result, through a variety of mechanisms related to scale economies, the real wage in the destination region increases rather than decreases (Kanbur and Rapoport, 2005).

In recent years, regional differences in living standards have increasingly been recognized as a potentially important link to overall economic development and growth of a country. The World Bank's 2009 World Development Report titled *Reshaping Economic Geography* (World Bank, 2009) argues that spatial disparities increase in the early stages of development, and then diminish as countries reach high-income status. Drawing from the development experiences of upper-middle income countries, it argues that different dimensions of well-being converge at different speeds. This begins with essential household consumption and is followed by basic public services such as education, health and water and sanitation. Last to converge are wages and incomes.

A central message of the 2009 World Development Report is that "economic growth is seldom balanced, and that efforts to spread it prematurely will jeopardize progress." Thus, important trade-offs may be associated with the promotion of regional and spatial equity and overall economic efficiency. Specific policies should therefore focus more on facilitating the drivers of growth and less on initial spatial inequality. At the same time, governments face strong pressure to take action in the short-run to address existing regional disparities, rather than expect that they will be resolved in the long-run by human capital accumulation and reallocation of labor through internal migration.

This article aims to shed some light on the difficult question of whether and how the Indonesian government can undertake short-run fiscal policies that help alleviate disparities, while not impeding longer-term equalizing processes. Specifically, the following questions are addressed: (i) How does the standard of living vary among districts in Indonesia? (ii) Are these differences mainly due to differences in returns to mobile endowments or differences in endowments in a specific region/district, such as the level of education and family composition? (iii) To what extent is the current allocation of fiscal expenditures by the central authorities related to the needs of different districts and how are they related to the main determinants of the spatial welfare disparities? And (iv) what is the correlation between "immobile" characteristics at the district-level, such as access to infrastructure, health and education facilities and basic services (e.g., clean water, sanitation, electricity), and the marginal welfare returns of "mobile" endowments?

This study is related to a paper on Indonesia by McCulloch and Suharnoko Sjahrir (2008) that examines whether the growth rate in real GDP at the district level is due to the different endowments to districts (natural resources, human capital or physical infrastructure) or differences in geographic or spatial factors (proximity to large cities, or distance from the capital). Though related, some of the key differences of this paper are our focus on household welfare (measured by per capita expenditures PCE) rather than real GDP, the distinction between mobile endowments (embodied in individuals through, for example, their level of education or in households by the age and gender composition of household members) and immobile endowments and/or geographic characteristics. In our framework, investments in physical infrastructure are policy instruments that can increase the returns to household endowments in areas where returns are lower and where households are free to move to the regions or districts where they can obtain the highest returns for their mobile endowments.