

USING GROWTH DIAGNOSTICS TO IDENTIFY POLICY REFORM PRIORITIES

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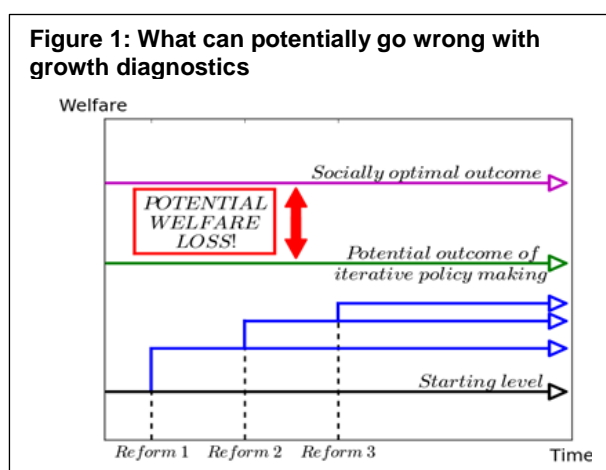
Introduction

A major policy concern in Scotland is the appropriate design of policy reforms to promote the two mutually supportive pillars of increasing competitiveness and tackling inequality. The Scottish Government has embarked on an exercise to identify targets for policy reform for promoting Inclusive Growth using “Growth Diagnostics”.

This note provides a synopsis of a report by Sayantan Ghosal & Moritz Mosenhauer on *Using Growth Diagnostics To Identify Targets for Policy Reform*, and sets out the policy implications. The report provides an analytical foundation for the use of growth diagnostics as a tool for identifying the targets of policy reform. It also provides a quantification of two broad groups of barriers to inclusive growth which could be targets of policy reform, one relating to productivity enhancing investment decisions by firms and the other to labour market participation. The Inclusive Growth Diagnostic developed by the Scottish Government identified a range of priorities to drive inclusive growth in Scotland (including the take up of digital and new business methods and as the unequal distribution of caring responsibilities), based on international and national benchmarking and other analysis. Many of these priorities can be grouped under the two broad barrier groups – enhancing investment and labour market participation - and thus could potentially be modelled using this framework. This could provide an additional or complementary methodology for identifying inclusive growth priorities in Scotland.

How the growth diagnostic model works

The main idea¹ underpinning Growth Diagnostics is that: if (a) the full list of reforms is unknowable/ impractical, and (b) figuring out all the interactions across the economy is a near-impossible task, the best approach is to focus on the reforms where the direct effects can be reasonably guessed to be large. The principle to follow is simple: go for the reforms that reduce the strongest barriers, and hence produce the biggest bang for the reform buck.



In practice, the growth diagnostic is a strategic tool which can be used to inform policy reform through identifying the constraints which, if relaxed, would result in the greatest possible *direct* impact on social welfare at a given point in time. Reducing such constraints, however, will also have *indirect* effects on other activities, thus the overall social welfare could increase or decrease (e.g. funding higher education by higher income tax can distort incentives and the net social welfare effect may be unclear). This means that even if social welfare increases after each policy reform, over time when repeated, the sequence of improvements become smaller, converging to an outcome that is below the socially optimal one (illustrated in Figure 1).

The Scottish Government's diagnostic tried to take this issue into account by considering broader synergies and trade-offs in the quantification of impact.

Through their revised growth diagnostic model, Ghosal and Mosenhauer² formally set out the theoretical conditions under which the iterative social welfare improvements generated by policy reform must converge to the socially optimal outcome over time. The model allows for the possibility of a policy mistakes, however, unlike previous academic growth diagnostic models, the model includes a learn by doing assumption that means that the welfare costs of policy mistakes are constrained and over time, are less likely to be made, resulting in a socially optimal outcome.

¹ Hausmann, R., D. Rodrik and A. Velasco "Growth Diagnostics", , mimeo, revised March 2005

² Ghosal and Mosenhauer (2106 a), "Growth Diagnostics: A Foundation", mimeo

Understanding (and Quantifying) Productivity and Participation Distortions

The model developed by Ghosal and Mosenhauer³ uses a small open economy model of efficiency wages, capital accumulation and skill-biased technological progress. In the model, investment decisions made by firms and skill formation and participation decisions made by workers determine productivity, the supply of employment opportunities and their take up in the long run. A key feature of the model is that a higher proportion of skilled workers in the population stimulates greater investment by firms, so that the supply and demand for high value added employment opportunities are mutually complementary and simultaneously determined in the long run. The model identifies two main groups of constraints (which the many⁴ of the priorities identified in the Scottish Government's Inclusive Growth Diagnostic (SGIGD) can be mapped to):

(a) **Capital gap**: the social valuation of a productivity enhancing investment made by individual firms is less than the firms valuation as the firm does not value the impact on economy wide productivity of its own investment decision.

(SGIGD priorities: Digital and new business methods take up, digital connectivity, energy infrastructure and costs, transport infrastructure, business and higher education spillovers, cost and access to finance, innovation skills, global value chains, industrial policy, innovation ecosystem, business environment and innovation finance.)

(b) **Participation gap**: there is a gap between the private and social valuations of skill formation and labour market participation by workers belonging to different social groups and characterized by different costs of participation.

(SGIGD priorities: inequality of caring responsibilities, lifestyle choices – determined by social and economic deprivation, unequal distribution of wealth, job design and flexibility, unequal distribution of wages, gender segregation, housing, social networks, engagement.)

The main implication of the model developed was that, comparing across different long run levels of labour market participation: in a country with high productivity and high labour market participation the best inclusive growth policies are ones that improve labour market participation. Whereas in a low productivity, low labour market participation economy the best inclusive growth policies are ones that increase investment and boost competitiveness.

Options for further development

To identify which areas should be policy reform priorities within Scotland, Ghosal and Mosenhauer's model would need to be further developed, from a theoretical to a practical model, to enable the use of Scottish data. This would enable the model to be used to test the results from existing analysis such as the Scottish Government's Inclusive Growth Diagnostic and potentially to develop a robust modelling approach to inclusive growth policy decisions within the Scottish Government.

³ Ghosal and Mosenhauer (2016 b), "Beliefs, Participation and Productivity", mimeo. This model, in turn, builds on previous work: (i) Dalton, P, S. Ghosal and A. Mani, "Poverty and aspirations failure" (with P. Dalton and A. Mani), Economic Journal, DOI: 10.1111/econj.12210, 2016. (ii) Dalton, P. and S. Ghosal, "Self-fulfilling mistakes: Characterization and Welfare", Economic Journal, forthcoming. (iii) Broadberry, S., S. Ghosal and E. Proto (2016), "Anonymity, Efficiency Wages and Technological Progress", Journal of Development Economics, forthcoming. (iv) Ghosal, S., S. Jana, A. Mani, S. Mitra, S. Roy (2016), "Sex Workers, Stigma and Self-Belief: Evidence from a Psychological Training Program in India" mimeo.

⁴ Some of the constraints (e.g. environmental quality) straddle both the capital gap and the participation gap. Others, such as fertility rate and migration, related to issues of declining population and democracy, and Government management, Tax & Welfare System and Trade agreements, which fall within the remit of government policy, are not present in the formal model.