

The Compensation Hypothesis Revisited and Reversed

Andreas Bergh^{†*} 

This note describes how research on the link between economic openness and government size has changed over time. Early interpretations suggested that countries develop welfare states to compensate for volatility caused by economic openness (the compensation hypothesis). Recent findings have cast doubts on this interpretation. For example, more open economies are on average not more volatile, and economic openness does not unambiguously increase the social security demands from voters. Some recent studies suggest that economic openness is particularly beneficial for countries with high taxes and high-income equality. A re-interpretation of the compensation hypothesis is thus possible: Through trade, the citizens in large welfare states enjoy some of the benefits associated with cheap labour and high wage dispersion despite their domestic economy being characterized by high real wages, high taxes and a compressed wage distribution.

Background

The idea that open economies develop large welfare states or corporatist institutions as a response to the volatility caused by economic openness and international markets is known as the compensation hypothesis. In economics, the argument is often attributed to Rodrik (1997, 1998), while the standard reference for political scientists is Katzenstein (1985). As noted by Garrett (2001), the idea was used before that by Ruggie (1982) to explain the growth of the American welfare state after the signing of the Bretton Woods agreement. The core idea can be traced back further, at least to Cameron (1978) and Lindbeck (1975).

As commonly used in the literature, the compensation hypothesis suggests the following causal chain:

- Economic globalization means that countries are increasingly exposed to international markets and affected by events in the rest of the world.

* Andreas Bergh, Department of Economics, Lund University Box 7082, SE-22007 Lund, Sweden. Email: andreas.bergh@ifn.se.

[†] Research Institute of Industrial Economics (IFN), P.O. Box 55665, 102 15 Stockholm, Sweden.

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

- Such exposure to international markets means that the domestic economic situation becomes more volatile.
- The volatility induced by openness leads to higher demands for security arrangements among voters in the exposed country.
- These demands lead open countries to expand security institutions such as unemployment insurance, labour market training programs and welfare state institutions in general.
- As a result, more open economies tend to have bigger public sectors.

As will be shown in this note, the robustness of the positive association between government size and economic openness is disputed. More importantly, studies have identified problems regarding all links in the causal chain described above.

If the compensation hypothesis was correct, the positive association between openness and government size should hold both cross-sectionally between countries and within countries over time, allowing sufficient time for openness to affect public sector size via the political process. The support for that association is, however, fragile. Rodrik (1998) presented cross-country panel data using government consumption as a share of GDP and imports and exports relative to GDP. Alesina and Wacziarg (1998) argued that the positive correlation noted by Rodrik might be spurious if small countries (measured by population size) tend to have higher economic openness and larger government. They showed that controlling for country size rendered the link between openness and government size less robust.

Ram (2009) revisited the question using panel data covering 154 countries over 41 years, and confirmed the association found by Rodrik when using country fixed effects, rejecting the role of country size as an omitted variable. More recent evidence suggests, however, that results differ substantially depending on the data source used. Jetter and Parmeter (2015) found that smaller countries do have bigger governments, and that the findings by Ram (2009) might be driven by the specific dataset used (PWT 6.1). They also showed that results are sensitive to the timeframe and the country sample considered. The conclusion that the positive association is not robust is also strengthened by Garrett's (2001) findings that the positive correlation between openness and spending holds for levels, but not for changes over time as it should according to the hypothesis. For a recent survey of the conflicting results, see Anderson and Obeng (2020).

As expected, when an association is sensitive to the choice of timeframe, country sample and estimation method, several contributions have explored different types of heterogeneity in the association. For example, Nooruddin and Simmons (2009) argue that democracies respond to increases in openness by increasing spending while dictatorships respond by decreasing spending. Leibrecht et al. (2011) find evidence of the compensation hypothesis

in Western Europe, which is driven by countries with conservative welfare regime (according to the standard classification of Esping-Andersen 1990).¹ This finding highlights the fact that increases in (perceived or actual) volatility need not be met by corporatist or welfare state institutions: In some countries, the family and the market are more important insurance providers. For example, Potrafke (2019) examines the association for Asian non-OECD countries and finds no association between globalization and social expenditures in Asia, once time fixed effects are controlled for. There are also several indications that the political consequences of international trade depend on the trading partner. For example, people may react differently to trade with China compared to trade in general (Bergh & Kärnä forthcoming). In summary, there seems to be no systematic and robust link (within or between countries) between openness and government size.

The fragility of the fundamental association upon which the compensation hypothesis rests is less surprising considering that empirical or theoretical questions have been raised regarding all steps in the causal chain underpinning the hypothesis. First, it is true that globalization, and, in particular, economic openness worldwide, has been increasing for several decades (see, e.g., Gygli et al. 2019). It is not true, however, that economic openness necessarily means exposure to markets that induce volatility. As discussed by Down (2007), economic theory rather suggests that economic openness and international trade give rise to risk diversification, promoting rather than reducing stability. The openness-volatility link is questioned on similar theoretical grounds also by Kim (2007). Before that, Pierson (2001) noted that in the post-war period, output volatility appears to have been lower in the more open OECD economies compared to less open economies. Both Down (2007) and Kim (2007) present empirical evidence against the link between openness and volatility, demonstrating that more open economies are in fact not more volatile. Kim analyses 175 countries over the period 1950 to 2002 and finds no significant association between openness and domestic volatility. Down presents similar findings for a smaller set of countries and goes further by noting that trade integration may have eased rather than accentuated domestic economic volatility.²

The next causal step in the compensation hypothesis concerns the effect of openness on voter preferences. Evidence against the compensation hypothesis is presented by Dallinger (2013, 2014), who showed that the more open the economy of a country, the lower are the social security demands of its citizens. That pattern is opposite of what it should be according to the compensation hypothesis. In general, if openness does not lead to higher volatility, there is no reason to expect that globalization unambiguously increases voters' preferences for social insurance arrangements. If globalization mainly affects domestic economies by inducing structural changes that create winners and losers, these groups should differ with regard to

their social policy preferences, as noted by, for example, Walter (2010). In line with this reasoning, Balcells Ventura (2006) found empirically that the redistribution demands associated with trade openness are conditional on GDP per capita and the size of potential losing sectors in the economy.

A possible way to salvage the compensation hypothesis might be to note that policymakers might perceive a need to expand social security arrangements regardless of whether openness increases volatility, and regardless of how voter preferences are affected. Shelton (2007), however, showed that the expenditure associated with increased trade openness is largely not in categories that insure for risk, suggesting that even in samples where the expected correlation between government size and economic openness is found, the explanation provided by the compensation hypothesis does not fit the empirical pattern. This finding speaks against the possibility that policymakers or voters perceive economic openness to be associated with volatility, and that such perceptions (regardless of whether they are correct or not) are sufficient to explain political choices.

In summary, the general idea that more open economies need to or choose to develop bigger welfare states to compensate for volatility induced by global markets is not supported by data.

A New Compensation Hypothesis?

Even though the positive association between openness and government size is disputed, it should be acknowledged that empirical evidence has in general been somewhat kinder to the compensation hypothesis compared to the efficiency hypothesis (also known as the disciplining hypothesis or the race to the bottom hypothesis). According to the latter, economic globalization will force countries to lower taxes and benefits to attract capital and avoid attracting those who are likely to cost more than they contribute to the welfare state (Sinn 1997, 2003; Schulze and Ursprung 1999). There is very little evidence for such a 'race to the bottom'. In addition to the evidence regarding the openness-government size link cited above, see also the survey by Potrafke (2015) suggesting that globalization is not associated with lower overall tax revenue, and the study of developed welfare states by Brady et al. (2005) that concluded that globalization effects are far smaller than the effects of domestic political and economic factors and that globalization does not clearly cause welfare state expansion, reduction or convergence.

The fact that many countries combine large welfare states with high levels of economic openness, thus, still needs to be explained. As it turns out, there are findings that suggest a possible re-interpretation of the compensation hypothesis.

First of all, the industry mix in rich democracies differs substantially depending on the size of tax wedges, as shown by Davis and Henrekson (1997, 2004). Compared to low-tax countries, high-tax countries rely more heavily on large firms and more heavily on capital- and knowledge-intensive industries where products are more differentiated. Compared to countries where the industry mix has more small firms and a bigger local service sector, access to larger markets via economic openness is thus relatively more important for high-tax countries.

Second, Epifani and Gancia (2009) showed that countries with large welfare states and high taxes benefit from economic openness via a terms of trade mechanism. More specifically, the social security arrangements in large welfare states increase production costs due to high wages, high taxes and regulations that are costly for firms. These production costs, however, can be passed on to consumers globally. To do so, exporting firms in countries with high levels of social protection take advantage of the fact that they are not selling differentiated products on markets that are not perfectly competitive markets. They use their market power to increase prices, increasing revenue and remaining profitable despite operating in countries with high levels of social protection. In effect, the high production costs in rich welfare states are partly shifted to consumers globally. While a similar strategy can be used by firms in similar sectors that operate in low-tax countries, the size of these knowledge- and capital-intensive sectors is typically larger in high-tax countries, as noted above. In fact, Epifani and Gancia (2009) contrast their findings to the compensation hypothesis and note that ‘While the expansion of the public sector for insurance motives can be the optimal reaction to higher risk, the terms-of-trade externality leads to excessively large governments, as policy makers do not fully internalize the cost of taxation.’ (631).

Third, the general pattern that economic openness is particularly important for countries with large welfare states was noted also by Iversen (2005) who wrote:

[...] labor-intensive, low-productivity jobs do not thrive in the context of high social protection and intensive labor-market regulation, and without international trade countries cannot specialize in high value-added services. Lack of international trade and competition, therefore, not the growth of these, is the cause of current employment problems in high-protection countries. [74]

Consumers in high-tax countries also benefit from imports in a way that is less important for consumers in low-tax countries. The reason is that trade enables consumers in high-tax countries to consume products at low prices not because they have a large domestic low-wage sector (and the accompanying high domestic wage inequality) but because they are imported from countries where wages and taxes are lower, and business regulations are

fewer. As shown by Fajgelbaum and Khandelwal (2016), the effect of trade on domestic prices is pro-poor because low-income earners spend relatively more on traded goods, whereas high-income earners consume relatively more services.³ In countries with high taxes, high average wages and low wage dispersion, services will be relatively expensive (or available only in the shadow economy). Thus, economic openness will in a concrete way, at least partly, compensate consumers for high prices in the service sector by providing access to imported goods at low prices.

Taken together, the findings of Davis and Henrekson (1997, 2004), Epifani and Gancia (2009), Iversen (2005) and Fajgelbaum and Khandelwal (2016) suggest that if countries with high taxes and generous welfare states tend to have more open economies, one explanation might be that the negative side effects of high transfers and social protection are partly mitigated by economic openness that allows welfare states to specialize in high value-added products and services. That observation suggests a possible reinterpretation of the compensation hypothesis: Through trade, the citizens in large welfare states enjoy some of the benefits associated with cheap labour and high wage dispersion despite their domestic economy being characterized by high real wages, high taxes and a compressed wage distribution.

In fact, Acemoglu et al. (2017) developed a model of the world economy where trade allows some countries with bigger welfare states (what they call coddly capitalism) to free-ride on the innovations promoted by the reward structure in countries with what they call cutthroat capitalism.⁴

Could such a new compensation hypothesis be tested? In one way, the new hypothesis is formulated based on the testing of the original compensation hypothesis, done by scholars in several disciplines. An important difference between the two versions is that the original compensation hypotheses portrayed economic openness as the root cause of something problematic – volatility – that needed to be mitigated by the welfare state. The suggested reformulation instead implies that countries with large welfare states will run into problems – broadly speaking – if they do not promote economic openness. It also allows for the possibility that there are background factors that explain both welfare state size and economic openness, rendering the correlation between the two spurious. Both possibilities are likely to be fruitful areas for further research.

ACKNOWLEDGEMENT

Financial support from Jan Wallanders och Tom Hedelius stiftelse (grant P19-0180) is gratefully acknowledged.

NOTES

1. See also Benarroch and Pandey (2012) who argue that causality tests provide little or no support for a causal relationship between openness and aggregate or disaggregated government expenditure.

2. The link between openness and volatility is also quickly dismissed on empirical grounds by Alesina and Glaeser (2005).
3. That basic difference between the consumption baskets of high- and low-income households is well-known at least since Deaton and Muellbauer (1980).
4. To be fair, the authors also describe their results in terms of institutional complementarities, rather than free riding.

REFERENCES

- Acemoglu, D., Robinson, J. A. & Verdier, T. 2017. 'Asymmetric Growth and Institutions in an Interdependent World', *Journal of Political Economy*, 125(5), 1245–305.
- Alesina, A. & Glaeser, E. 2005. *Fighting Poverty in the US and Europe: A World of Difference*. Oxford: Oxford University Press.
- Alesina, A. & Wacziarg, R. 1998. 'Openness, Country Size and Government', *Journal of Public Economics*, 69(3), 305–21.
- Anderson, E. & Obeng, S. 2020. 'Globalisation and Government Spending: Evidence for the "Hyper-globalisation" of the 1990s and 2000s', *The World Economy*.
- Balcells Ventura, L. 2006. 'Trade Openness and Preferences for Redistribution: A Cross-National Assessment of the Compensation Hypothesis', *Business and Politics*, 8(2), 1–50.
- Benarroch, M. & Pandey, M. 2012. 'The Relationship between Trade Openness and Government Size: Does Disaggregating Government Expenditure Matter?', *Journal of Macroeconomics*, 34(1), 239–52.
- Bergh, A. & Kärnä, A. Forthcoming. 'Globalization and Populism in Europe', *Public Choice*.
- Brady, D., Seeleib-Kaiser, M. & Beckfield, J. 2005. 'Economic Globalization and the Welfare State in Affluent Democracies 1975-2001', *American Sociological Review*, 70(6), 921–48.
- Cameron, D. R. 1978. 'The Expansion of the Public Economy: A Comparative Analysis', *American Political Science Review*, 72(4), 1243–61.
- Dallinger, U. 2013. 'Economic Openness and Domestic Demand for Social Protection: A Multi-Level Analysis of Social Security Preferences between 1990 and 2006', *Comparative Sociology*, 12(5), 585–616.
- Dallinger, U. 2014. 'Globalization and Demand for Social Security: A Critical Examination of the Domestic Demand Approach', *Berliner Journal für Soziologie*, 24(1), 59–88.
- Davis, S. J. & Henrekson, M. (1997) 'Explaining National Differences in the Size and Industry Distribution of Employment', NBER Working Papers 6246.
- Davis, S. J. & Henrekson, M. (2004) 'Tax Effects on Work Activity, Industry Mix and Shadow Economy Size: Evidence from Rich-Country Comparisons.' NBER Working Papers 10509.
- Deaton, A. & Muellbauer, J. 1980. 'An Almost Ideal Demand System', *American Economic Review*, 70(3), 312–26.
- Down, I. 2007. 'Trade Openness, Country Size and Economic Volatility: The Compensation Hypothesis Revisited', *Business and Politics*, 9(2), 1–20.
- Epifani, P. & Gancia, G. 2009. 'Openness, Government Size and the Terms of Trade', *Review of Economics Studies*, 76(2), 629–68.
- Esping-Andersen, G. 1990. *The Three Worlds of Welfare Capitalism*. Princeton, NJ: Princeton University Press.
- Fajgelbaum, P. D. & Khandelwal, A. K. 2016. 'Measuring the Unequal Gains from Trade', *The Quarterly Journal of Economics*, 131(3), 1113–80.
- Garrett, G. 2001. 'Globalization and Government Spending around the World', *Studies in Comparative International Development*, 35(4), 3–29.
- Gygli, S., Haelg, F., Potrafke, N. & Sturm, J. E. 2019. 'The KOF Globalisation Index – Revisited', *Review of International Organizations*, 14(3), 543–74.
- Iversen, T. 2005. *Capitalism, Democracy and Welfare*. New York: Cambridge University Press.
- Jetter, M. & Parmeter, C. F. 2015. 'Trade Openness and Bigger Governments: The Role of Country Size Revisited', *European Journal of Political Economy*, 37, 49–63. <https://doi.org/10.1016/j.ejpoleco.2014.11.001>
- Katzenstein, P. J. 1985. *Small States in World Markets: Industrial Policy in Europe*. Ithaca, NY: Cornell University Press.

- Kim, S. Y. 2007. 'Openness, External Risk, and Volatility: Implications for the Compensation Hypothesis', *International Organization*, 61(1), 181.
- Leibrecht, M., Klien, M. & Onaran, O. 2011. 'Globalization, Welfare Regimes and Social Protection Expenditures in Western and Eastern European Countries', *Public Choice*, 148(3–4), 569–94.
- Lindbeck, A. 1975. 'Business Cycles, Politics, and International Economic Dependence', *Skandinaviska Enskildens Bank Quarterly Review*, 2, 53–68.
- Nooruddin, I. & Simmons, J. W. 2009. 'Openness, Uncertainty, and Social Spending: Implications for the Globalization- Welfare State Debate', *International Studies Quarterly*, 53(3), 841–66.
- Pierson, P. 2001. *The New Politics of the Welfare State*. Oxford: Oxford University Press.
- Potrafke, N. 2015. 'The Evidence on Globalisation', *The World Economy*, 38(3), 509–52.
- Potrafke, N. (2019) 'The Globalisation–Welfare State Nexus: Evidence from Asia', *World Economy*, 42(3), 959–74.
- Ram, R. 2009. 'Openness, Country Size, and Government Size: Additional Evidence from a Large Cross-Country Panel', *Journal of Public Economics*, 93(1–2), 213–18.
- Rodrik, D. 1997. *Has Globalization Gone Too Far?* Washington, DC: Institute for International Economics.
- Rodrik, D. 1998. 'Why Do More Open Economies Have Bigger Governments?', *The Journal of Political Economy*, 106(5), 997–1032.
- Ruggie, J. G. 1982. 'International Regimes, Transactions, and Change: Embedded Liberalism in the Postwar Economic Order', *International Organization*, 36(2), 379.
- Schulze, G. G. & Ursprung, H. W. 1999. 'Globalisation of the Economy and the Nation State', *The World Economy*, 22(3), 295–352.
- Shelton, C. A. 2007. 'The Size and Composition of Government Expenditure', *Journal of Public Economics*, 91(11–12), 2230–60.
- Sinn, H.-W. 1997. 'The Selection Principle and Market Failure in Systems Competition', *Journal of Public Economics*, 66, 247–74.
- Sinn, H.-W. 2003. *The New Systems Competition: A Construction Principle for Europe*. Cornwall: Blackwell.
- Walter, S. 2010. 'Globalization and the Welfare State: Testing the Microfoundations of the Compensation Hypothesis', *International Studies Quarterly*, 54(2), 403–26.