2020 Research report summary

Does investment in transport infrastructure boost economic growth?

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SNS

Summary

THE SWEDISH GOVERNMENT will spend 700 billion kronor (approximately USD 72 billion) on the 2018–2029 transport infrastructure plan. A key argument for this huge budget is the widespread notion that infrastructure investments boost economic growth. It is also indisputable that the development of the Swedish railroads in the 19th century, and the extensive road expansion during the 1950s, 1960s and 1970s had transformative effects on society. But a key reason for the large effects on society was that the existing travel opportunities were so limited. For instance, the travel time between Stockholm and Malmö was reduced from eight days to 19 hours when the southern main railroad opened in the 1860s. But because the transport infrastructure is already so well developed in postmodern countries, such transformational investments are no longer possible. So what is the evidence that transport investments improve economic growth today? That is the central question of this report.

The report distinguishes long- from short-term effects of infrastructure investments on economic growth. The latter arising during the construction of the project. That is, economic growth can be fuelled by increased public spending, provided that qualified and unemployed labour is available. However, this does not seem to be the case in Sweden today; on the contrary, the industry has difficulty with the current supply of skilled labour.

The long-term effects on economic growth occur because new transport infrastructure improves accessibility for individuals and firms. The existence of agglomeration advantages, meaning that productivity increases with accessibility between individuals and firms, is well established in the literature. New ideas and knowledge are given the opportunity to thrive and spread. Proximity between people and firms facilitates networking, which also increases matching in the

labour market. Better accessibility also facilitates trade and firm's access to markets and intermediate goods which also increase productivity. Therefore, infrastructure investments that increase accessibility in a geographically concentrated labour market can have major effects on economic growth. However, agglomeration advantages are most pronounced at distances shorter than five kilometres and disappear for distances just over twenty kilometres.

It is thus the improvements in accessibility that drive economic growth, not the length of the of road or railroad itself. Building infrastructure with little effect on accessibility that only cater to a few users and firms will therefore have a limited effect on economic growth. Moreover, not all investments that increase accessibility affect economic growth. For instance, much of the Swedish infrastructure planning focuses on facilitating longer commuting distances. However, this has limited impact on economic growth, essentially because the infrastructure is already well developed. It primarily leads to people settling further from their jobs or getting more leisure time. Of course, having a nicer house and more leisure time creates benefits to be considered in the project appraisal. Yet, it does not boost economic growth.

Infrastructure investments that facilitate long-distance travel have a limited net impact on economic growth at the national level because the agglomeration advantages decline so quickly with distance. However, such investments might redistribute growth between cities. In addition, not all cities are always winners: for smaller cities, improved accessibility to larger cities can paradoxically reduce economic growth.

A rarely mentioned issue is that an infrastructure planning striving for ever-longer commuting distances favours well-educated men as a group and disadvantage women as a group. Researchers, among others Erika Sandow have shown that women commuting long distances experience poorer health, and even an increased risk of dying. This applies regardless of transport mode. For well-educated men, no negative effects can be established. Economically men also benefit more than women from commuting. On the contrary, urban environments provide more even conditions for men and women to participate in working life.

If investments in transport infrastructure today have a relatively limited effect on accessibility, pricing and other policies that affect the utilisation of the existing transport infrastructure (for instance, the scheduling of trains) have a major impact on accessibility. This is because new infrastructure makes only marginal contributions, while the pricing of transport, and other policy instruments, affects the utilisation of the entire existing transport system. An important policy conclusion from the report is that it would be better to improve the utilisation of the existing transport infrastructure, through

balanced pricing, digitization, automation and electrification — before investing hundreds of billions of kronor in the construction of new ones.

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