

# Inferring Firm's Fitness from Business-Type Information

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Recently, new metrics of “economic complexity” of countries, calculated from data on what each country is exporting, have been proposed by Hidalgo and Hausmann [1] and Tacchella *et al.* [2]. It has been demonstrated [1,3] that these metrics not only have linear relations to the countries' gross domestic product (GDP) per capita, but also are indicative of future GDP growth.

Considering the success of these ideas in the world trade system, their application to other economic systems could be fruitful. As we can use the “business-type” information of firms as an indicator of what they are selling, the above indices can be defined for each firm or each group of firms. In this way, we computed the indices for every business-type from detailed information of Japanese firms provided by Teikoku Data Bank, one of the largest credit reporters in Japan. We then tested the relationship between the obtained quantities and performance of firms signaled by sales or value added (i.e. sales minus costs). Lastly, we discuss the significance of the results and future research directions.

## References

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