

High performance organizations and economies



Linking firm performance and a country's economy

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Global economies today face the challenges of uncertainty and vulnerability. As the United States slowly recovers from the Great Recession, Europe is grappling with financial turmoil, while emerging economies such as China, India and Brazil are cooling after an explosion of growth. In order to survive and gain competitive advantage in this volatile global environment, organizational leaders need to understand not only the drivers of exceptional organizational performance, but also the drivers of exceptional macroeconomic performance. To that end, IBM has explored the characteristics of High Performance Organizations (HPOs) and studied their effects on macroeconomic performance.

Since the 1990s, HPOs have increasingly attracted interest from academia and the business world (Boxall & Macky, 2009). When organizations execute high performance practices, they are more successful in a wide range of employee outcomes such as job satisfaction and turnover intentions (Huselid, 1995). HPOs also demonstrate exceptional organizational performance, in the form of stock market returns and labor productivity (Combs, Liu, Hall, & Ketchen, 2006). It stands to reason that HPOs, by consistently producing better employee and business outcomes, can positively impact the economy in which they operate. However, little research has analyzed the effect of HPO drivers on macroeconomic performance. Further, a clearly articulated theoretical model that explains the mechanisms through which HPOs might affect the economic climate has yet to be presented. To remedy this, we have presented a robust model of HPOs and macroeconomic performance, as well as provided empirical support for the link between them.



The WorkTrends™ survey

Our analyses are based on data collected in 2011 from two different sources:

- Macroeconomic performance data were collected from the World Economic Outlook of the International Monetary Fund (IMF) and the Conference Board Economy Database¹
- HPO characteristics were assessed with IBM's WorkTrends™ survey².

The WorkTrends survey has been administered annually or biannually since 1984. In 2011, the WorkTrends survey was taken online by approximately 31,000 employees in 27 different countries who work full-time for an organization of 100 staff members or more. The survey asks employees more than 200 questions about their opinions and attitudes, manager and leadership behaviors, organizational practices, and demographic variables. WorkTrends data are unique, because they are a representative sample; a cross-section of workers across the globe. The global nature of these data enabled us to evaluate the link between country-level high performance organizational characteristics and macroeconomic performance.

What makes a high performance organization?

HPOs consistently deliver high quality products and services (Owen, Mundy, Guild, & Guild, 2001). They can be differentiated by their continually exceptional performance such as higher customer satisfaction, greater customer loyalty and higher productivity (Wiley, 2010). Our review of the literature suggested HPOs share the following four fundamental characteristics: customer orientation, quality emphasis, innovation and effective leadership.

Customer Orientation

Customer orientation is an organization's disposition to continuously deliver exceptional value to its customers (Slater & Narver, 1994). In WorkTrends, we asked employees to evaluate customer orientation with the following items on a five-point agreement scale:

- Customer problems get corrected quickly
- Our policies and procedures are designed to make it easy for customers to do business with us

- We regularly use customer feedback to improve our work processes
- Overall, customers are very satisfied with the products and services they receive from my organization

Empirical evidence supports the link between customer orientation and business performance. Organizations are more successful when they embrace a customer-focused orientation (Narver & Slater, 1990). Appiah-Adu & Sing (1998), and Hartnell, Ou & Kinicki (2011) found customer orientation is positively related to operational performance such as quality and service, new products' success, sales growth and return on investment.

Quality emphasis

Quality emphasis is a set of organizational practices to assist the consistent production of high quality products and services (Powell, 1995). We asked employees to rate quality emphasis by indicating their level of agreement to the following items about where they work:

- We set clear performance standards for product/service quality
- Our improvement efforts result in both higher quality and lower costs
- We are continually improving the quality of our products and services
- Day-to-day decisions demonstrate that quality and improvement are top priorities

Like customer orientation, empirical research has established the link between quality emphasis and organizational performance (Juran, 1993; Powell, 1995).

Innovation

Innovation is the process of creating better or new products, processes, services, or ideas (Kimberly & Evanisko, 1981). We assessed innovation with the following items:

- Where I work, employees receive the support they need to implement innovative ideas
- When employees have good ideas, management makes use of them
- Where I work, we act on promising new or innovative ideas
- I feel free to try new things on my job, even though my efforts may not succeed

Organizations that emphasize innovation gain more market share and are more profitable than less innovative organizations (Gopalakrishnan, 2000). This could be for two reasons. First, the knowledge contained in the innovations is not readily available to competitors and thus protects profit margins, resulting in significant financial benefits (Rumelt, 1987). Second, innovation helps organizations develop products or services at a lower cost than their competitors (Afuah, 2003).

Effective leadership

An organization’s success is fundamentally dependent upon the skills and actions of its leaders (Wiley, 2010), especially in highly competitive markets where organizations face the challenges of scarce opportunities and limited resources (Wasserman, Nohria, & Anand, 2001). The Leadership Effectiveness Index (LEI) was developed to measure employees’ perceptions of their organization’s senior leaders. Senior leaders are effective if they are capable and trustworthy, inspire confidence, are committed to high quality products and services, and have communicated a motivating vision. We consider the following items when evaluating employee perceptions of leaders at their organization:

- Senior management at my organization has the ability to deal with the challenges we face
- I have confidence in my organization’s senior leaders
- I trust the senior leaders of this organization
- The senior leaders of my organization have communicated a vision of the future that motivates me

The quality of executive leaders explains around 45 percent of an organization’s performance, (Day & Lord, 1988) and effective leadership positively affects organizational performance outcomes such as labor productivity, return on assets, and outputs of patents (Wang, Courtright, & Colbert, 2011).

A model of HPOs and macroeconomic performance

The link between organizational characteristics and organizational performance has been studied extensively in the literature. However, few studies have looked beyond organizational-level outcomes and considered the broader effects of HPOs on the economy. HPOs have the potential to influence macroeconomic performance via three mechanisms, each a major component of gross domestic product (GDP): consumption, investment and international trade.

- **Consumption:** More successful firms contribute to increased demand for jobs. This in turn boosts households’ incomes and the overall aggregate demand
- **Investment:** Successful firms are able to expand and invest more efficiently in research and development
- **International trade:** As firms perform better and grow, they have the resources to expand their operations and explore new markets, increasing overall exports.

Figure 1 illustrates how HPOs may affect the national economy.



Figure 1: Organizational characteristics and macroeconomic performance

The empirical link between HPOs and macroeconomic performance

To empirically assess the model presented in Figure 1, we aggregated high performance organizational practices to the country level and then correlated them with macroeconomic performance. Following previous research, we defined macroeconomic performance with two indicators: economic growth and labor productivity.³

Economic growth

Economic growth plays a crucial role in reducing poverty and increasing countries’ living standards and therefore overall wealth (Barro and Sala-i-Martin, 1995). Economic growth is commonly measured with the growth rate of real gross domestic product (RGDP) per capita (Borensztein, Di Gregorio, & Lee, 1998; Mankiw, Romer, & Weil, 1992).

Labor productivity

Labor productivity is used by other economists to measure macroeconomic performance (Hall & Jones, 1999). Labor productivity is defined as RGDP per worker. It enables us to explore the role played by the most important factor of production: labor, as it measures how much output is being generated by each worker.⁴

Table 1 displays the results from our empirical analysis, which shows statistically significant correlation coefficients between each HPO characteristics and each macroeconomic performance measure examined. These results suggest improving certain organizational characteristics may have a significant impact on an economy at a national level.

| | Economic growth | Labor Productivity Growth |
|----------------------|------------------------|----------------------------------|
| Customer Orientation | .41 | .37 |
| Quality Emphasis | .51 | .46 |
| Innovation | .55 | .51 |
| LEI | .48 | .46 |

Note: All values are Pearson Product Moment correlations. N=27.
 All correlations statistically significant at the p < .05 level.

Table 1: Correlations between hpo characteristics and macroeconomic performance

Figure 2 and Figure 3 compare the macroeconomic performance of the five top-scoring countries per HPO characteristics with that of the five bottom-scoring countries. The top five countries show significantly higher GDP per capita growth and labor productivity growth than the bottom five countries for each characteristic. The results suggest significant relationships between HPO characteristics and macroeconomic performance.

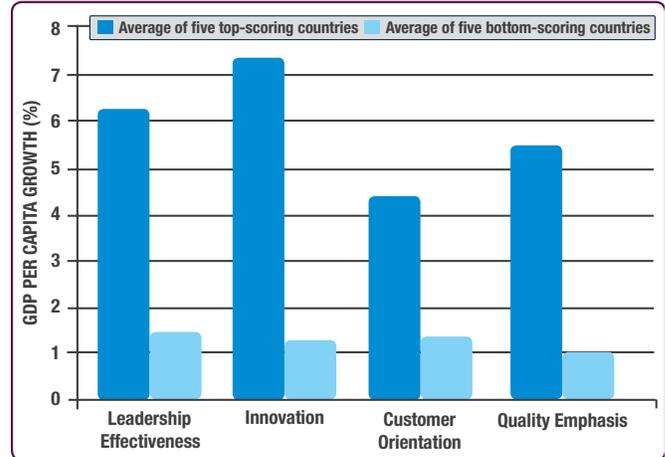


Figure 2: Impact of organizational characteristics on economic growth

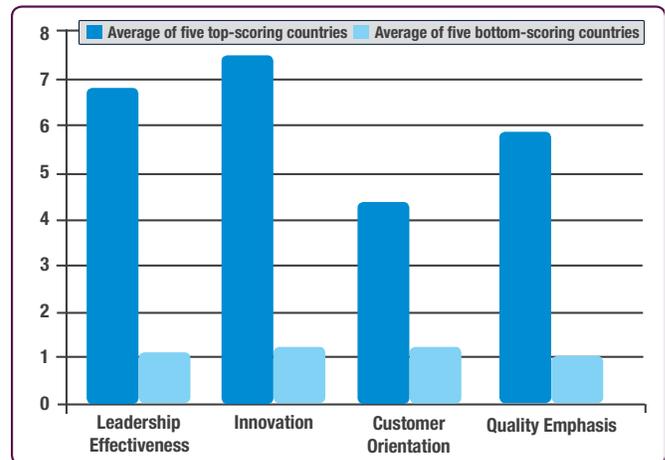


Figure 3: Impact of organizational characteristics on labor productivity growth

Table 2 shows the countries in our sample ranked by each HPO characteristic. The results reveal that emerging markets in Asia (India, China and Indonesia) consistently place in the top five across all HPO characteristics. These countries also show strong economic performance over the last 10 years. On the other hand, Japan and Italy – the developed economies that have significantly slowed down in recent years – are consistently located in the bottom five on HPO characteristics. The US, which has recovered from the economic downturn slightly better than European countries, is in the top five for customer orientation only. Overall, our results suggest countries tend to perform better when there is a higher incidence of firms that are customer-orientated, place greater emphasis on quality, are more innovative, and have more effective senior leaders.

| Innovation | | |
|----------------------|---------------|----|
| Top 5 | India | 69 |
| | Indonesia | 56 |
| | China | 55 |
| | Qatar | 53 |
| | Turkey | 53 |
| Bottom 5 | Japan | 27 |
| | Italy | 35 |
| | Finland | 36 |
| | Spain | 37 |
| | South Korea | 40 |
| Customer Orientation | | |
| Top 5 | India | 82 |
| | Indonesia | 76 |
| | Switzerland | 72 |
| | China | 72 |
| | United States | 71 |
| Bottom 5 | Japan | 43 |
| | Argentina | 56 |
| | Italy | 58 |
| | Spain | 60 |
| | South Korea | 62 |
| Quality Emphasis | | |
| Top 5 | India | 80 |
| | China | 69 |
| | Indonesia | 69 |
| | South Africa | 69 |
| | Saudi Arabia | 67 |
| Bottom 5 | Japan | 47 |
| | Italy | 54 |
| | Argentina | 54 |
| | France | 56 |
| | Spain | 56 |
| Leader Effectiveness | | |
| Top 5 | India | 74 |
| | Qatar | 60 |
| | Indonesia | 59 |
| | Netherlands | 59 |
| | China | 58 |
| Bottom 5 | Japan | 31 |
| | Argentina | 40 |
| | Finland | 41 |
| | Italy | 41 |
| | France | 42 |

Table 2: Countries ranked by hpo characteristics

The results demonstrated in *Table 2* may be explained by the characteristics of emerging markets. According to The Center for Knowledge Societies, emerging markets are those “regions of the world that are experiencing rapid informationalization under conditions of limited or partial industrialization.” Emerging markets lie at the intersection of non-traditional user behavior, the rise of new user groups, and innovations in product technologies and platforms, which provide tremendous opportunities for market growth and innovation (The Center for Knowledge Societies). Compared to organizations in developed markets that have mature and relatively stable markets, the organizations in emerging markets are more likely to continuously improve their products and cut costs through innovation to increase market share. These organizations are also more likely to put a strong emphasis on quality and customer services to earn new customers’ acceptance. The organizational leaders in emerging markets are more likely to demonstrate strong leadership capabilities in dealing with fast changing situations. As a result, organizations in emerging markets show rapid financial growth, contributing to exceptional overall economic performance.

Conclusion

The literature linking HPO characteristics and firm performance is extensive. However, few studies have discussed the effects of HPOs on macroeconomic performance. Also lacking is a theory that explains the relationship between organizational characteristics and macroeconomic performance. To fill this gap, we developed a detailed model of HPO and macroeconomic performance, and then empirically assessed the model using a global survey across 27 countries. Results indicated countries enjoy higher economic and labor productivity growth rates when they are filled with companies that engage in HPO practices, such as customer orientation, quality emphasis, innovation, and leadership effectiveness. This is likely because HPOs yield better organizational performance, such as higher profits and lower costs. On the aggregate, this contributes to higher consumption, investment, and international trade at the country level, which in turn feeds macroeconomic performance.

Our findings suggest characteristics that enable firms to gain and sustain exceptional business results also enhance macroeconomic performance. The implications of this conclusion are instructive to organizational leaders at the company and country levels. HPO practices help leaders cultivate better firm performance, giving them a competitive advantage in the current uncertain global environment. Further, given our results linking organizational and national performance, policy makers have an interest in supporting firm performance to help the national economy.

Organizational leaders and policy makers can improve their firm's and their country's performance by emulating HPOs:

- Organizations can focus on customer orientation by seeking and sharing information about customers' needs and expectations, delivering customer service training, and recognizing excellent service (Schneider & Bowen, 1995).
- Organizations can emphasize quality by setting clear and measurable standards for product and service and introducing quality assurance systems.
- Practices that promote innovation can be implemented, such as setting up a fail-safe environment, encouraging participative decision-making and idea sharing, and rewarding creative problem-solving and idea development.
- Organizations can select effective leaders by using the right assessment tools or and improving current leaders' skills by providing opportunities for training and development.

This study is one of the first of its kind. Being exploratory, future research on the topic is suggested. Specifically, studies that expand the sample to include more countries or multiple years would be very valuable. Also, future research could empirically evaluate the mediating role of job growth, consumption, and the other economic phenomena hypothesized in *Figure 1*.

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Appendix: Macroeconomic indicator definitions

Economic growth

Economic growth (EG) is one of the main determinants of a country's standard of living and one of the main instruments for poverty alleviation (Ravallion, 2001; Dollar & Kraay, 2002). EG is commonly measured as the growth rate of real gross domestic product (RGDP) per capita. GDP per capita is the total market value of all final goods and services produced in a country in a given period of time divided by the average (or mid-year) population for the same period.

Labor productivity

Another indicator to measure a country's economic performance is labor productivity. Labor productivity is commonly measured as real gross domestic product divided by the number of people employed during that period.

Real and nominal GDP per capita

GDP per capita is commonly reported in nominal and real terms. Nominal GDP per capita is expressed in current market prices and therefore incorporates changes in prices. Real GDP per capita is GDP per capita evaluated at the market prices of some base year and accounts for real changes in quantities produced over time. When comparing GDP per capita figures from one period to another, it is desirable to use real GDP per capita. For an illustrative example, consider the following table that displays the hypothetical nominal and real GDP per capita in the UK for 2009 and 2010.

| | Total Quantity of Final Goods and Services Produced (Millions) | Market Prices | Population | Nominal GDP per Capita | Real GDP per Capita (Base Year 2009) |
|------|--|---------------|------------|------------------------|--------------------------------------|
| 2009 | 30,000 | £10 | 60.0 | £5,000 | £5,000 |
| 2010 | 35,000 | £15 | 61.0 | £8,607 | £5,738 |

Table 3: Hypothetical nominal and real GDP per capita in the UK for 2009 and 2010

The table shows that UK's GDP per capita in nominal terms increased by 72.1 percent between 2009 and 2010 (from £5,000 to £8,607). However, prices also increased by 50 percent during the same period (from £10 to £15). To meaningfully compare UK's 2010 GDP per capita to its 2009 GDP per capita, we multiply the 2010 total quantity of final goods and services produced by the market price in 2009. Then we divide this figure by the population in 2010. We define this as 2010 GDP per capita at 2009 constant prices or simply 2010 real GDP per capita. The 2010 real GDP per capita equals £5,738 $((35,000 \text{ million} \times 10) / (61 \text{ million}))$. Using real GDP per capita, we obtain a more realistic growth rate of 14.7 percent (from £5,000 to £5,738), and not 72.1 percent, as it appeared with nominal data.

The Purchasing Power Parity (PPP) term

Real GDP is commonly expressed in US dollars using the market exchange rate or the purchasing power parity (PPP) conversion rate. When we compare real GDP across countries, the PPP is a more precise measure than the market exchange rate because it takes into account both the relative differences of costs of living and the inflation rates between two different countries. Taking the market exchange rates would distort real differences in income and would produce misleading conclusions. The purchasing power parity (PPP) between two countries is the rate at which the currency of one country needs to be converted into that of a second country to verify that a given amount of the first country's currency will purchase the same volume of goods and services in the second

country as it does in the first. The IMF and the World Bank commonly express PPP as local currency per US dollar.

To facilitate price comparisons across countries, the International Comparisons Program (ICP) was established by the United Nations and the University of Pennsylvania. PPPs generated by the ICP are based on a global survey of prices.⁵ The PPP rate is provided by the World Economic Outlook. To calculate the GDP per capita in PPP terms we use the following formula:

$$\text{Real GDP per capita at PPP} = \frac{\text{Real GDP per capita in national currency}}{\text{Implied PPP conversion rate}}$$

For an illustrative example, suppose that the salary in 2010 of John, an economist, is 50,000 US Dollars and the market exchange rate reported by Yahoo! Finance is 10 Mexican pesos per US dollar. If we use this exchange rate, this would imply that John's salary corresponds to the salary of 500,000 Mexican pesos earned by Michael in Mexico. We assume that in the same period a BMW cost 250,000 Mexican pesos in Mexico but only 15,000 US Dollars in the United States given its technological advantage with respect to Mexico and its higher standard of living. While John can buy three BMWs in the US, Michael can only buy two given his salary in Mexico. Therefore, although they earn the same nominal salary, their standards of living are different given the differences in the costs of living. The PPP rate converter considers these discrepancies and in this specific case would be 16.66 Mexican pesos per US Dollar (250,000/15,000) and not 10. So in PPP terms Michael's salary in the US would be 30,000 US dollars (500,000/16.67).

Note that two countries with the same currency (Germany and France for example) may have different PPP rates because these countries have different inflation rates and different standards of living.

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Produced in the United States of America
February 2014

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- 1 Data are available at: <http://www.imf.org/external/ns/cs.aspx?id=28> and <http://www.conference-board.org/data/economydatabase/>
- 2 WorkTrends is a research program begun under the direction of Dr. Jack Wiley in 1984. In its current form, WorkTrends is a multi-topic survey completed online by a sample of employees representative of a country’s working population in terms of industry mix, job type, gender, age and other key organizational and demographic variables. In most countries, survey takers must be adults who work full-time for an organization of 100 employees or more; this threshold drops to 25 employees or more in countries with smaller economies or hard-to-reach populations. The survey has over 200 items that cover a wide range of workplace issues, including senior leader and direct manager effectiveness, recognition, growth and development, employee engagement, customer orientation, quality emphasis, innovation, corporate social responsibility, workplace safety, work stress and performance confidence. In 2012, over 33,000 employees were surveyed, representing 28 countries.
- 3 See the Appendix for a detailed explanation of the macroeconomic performance indicators used in this study.
- 4 Several authors suggest that RGDP per hour worked would be a more suitable measure of labor productivity. The reason is that labor legislations differ significantly across countries. For example, according to the Conference Board data, the average annual hours worked per worker in France is 1,441 and in the U.S. 1,705. This would lead to misleading conclusions. However, data on average annual hours worked per worker are only available for OECD countries so taking this indicator would reduce our sample size significantly
- 5 Source: <http://www.imf.org/external/pubs/ft/fandd/2007/03/basics.html>.



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