

Survey of Small Business Owners in Togo, West Africa Using the Kirton Adaptor-Innovator Scale

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Abstract

The Kirton Adaptor-Innovator Scale (KAI) was submitted to a sample of 23 Togolese owners of small manufacturing or service businesses.

Hypotheses examined:

- 1) Family business owners score higher as adaptors than owners of incorporated businesses. Correlation is 0.18 and is stronger for women's firms.
- 2) Incorporated businesses have business plans, professional managers and formal training programs. This finding indicates that business training would be valuable.
- 3) Small businesses owners have higher innovation scores than larger businesses. This finding supports neo-classical economic theory that competitive markets inspire innovation.
- 4) Owners of older businesses score higher as adaptors. Correlation 0.36 for men, but correlation -0.17 for women.
- 5) Togolese men's scores as innovators are higher than women's. Correlation of 0.12 gives scant support for this hypothesis, especially in regressions.

Introduction

Currently considerable effort is expended in Africa on encouraging small and medium enterprises. Under Structural Adjustment Programs to reduce foreign debts, as state corporations are dismantled the politically acceptable alternative would be African-owned companies. In most sub-Saharan countries with weak business classes unable to launch large companies, African entrepreneurs must be nurtured from small beginnings.

In the process of nurturing small and medium enterprises, a major issue is whether the market creates entrepreneurs or cultural dynamic creates entrepreneurs. Neo-classical economic theory assumes that profit-oriented individuals will naturally respond to new market opportunities. In that case, the existence of many small competing firms in the formal and informal sectors in African countries leads inevitably to entrepreneurial behavior. Historians of capitalism, such as Max Weber and David McClelland, who explain why market systems did not appear sooner in history, use

models of cultural changes among business owners to explain the development of entrepreneurs. Though in practice both market and cultural conditions are necessary to nurture entrepreneurship, a statistical test that would separate the two would be helpful.

Kirton Adaptor-Innovator Scale

For corporations, Michael Kirton developed an Adaptor-Innovator Scale (KAI) to show the difference between entrepreneurs and administrators within a business organization. Through a list of questions about management style, Kirton shows that some business people prefer to be innovators and others adaptors. Kirton stresses that he is testing "a theory of cognitive style" rather than intellectual capacity (Kirton, 1989, pp.1-36). Nevertheless, he finds that in business successful entrepreneurs have high innovator scores, while successful subordinates have high adaptor scores. Given the deference shown to entrepreneurs, Kirton's theory still is value-laden, despite its statistical robustness.

Kirton's scale (KAI) has been tested in Australia, Canada, Great Britain, New Zealand, U.S.A., Malaysia and Singapore (all English-speaking samples) as well as Italy and Mexico in translation. All of them have "remarkably similar mean scores" (Kirton, 1989, 62). The common European cultural context of the samples seems to result in a similar distribution of cognitive styles.

Within the European cultural context, gender is the most important difference in KAI scores. Women, irrespective of their occupation, score significantly more adaptor than innovator (Kirton, 1989, 60).

In studies of Iranian and Indian managers and black South African business students, the KAI scores are significantly more adaptor than European scores (Kirton, 1989, 62). Though Kirton does not mention it, the Iranian, Indian, and South African KAI scores are very close to European women's scores. He does point out that Indian women managers, though, score significantly more innovator than male managers. He hypothesizes that Indian women managers have had to cross more cultural boundaries than men, so only the most innovator have done so (63).

Togo's Business Environment

The Republic of Togo is a tropical country in West Africa known for its exports of cocoa and phosphates. It gained its independence in 1960 from France. Since the four million Togolese people speak as many as 44 languages, the official language remains French. The government is controlled by a military dictator who took power in 1967. As is the practice along the West African coast, men run the government, while women traditionally control internal trade. Though the market has been relatively free, the Gross Domestic Product per person was equivalent to only U.S. \$738 in 1991. Modern industry and services remain undeveloped with the consequence that Togo's

Human Development Index only surpasses Bangladesh, Cambodia, Bhutan, Nepal, Afghanistan and twenty-four other African countries (UNDP 1994, p.131). If modern entrepreneurship can develop in Togo, it can appear in the poorest of the poor nations of the world.

Using the KAI in an African context involves some cultural adjustments in addition to translating it. Interviews with African students in the United States revealed that a psychological test that required a respondent to evaluate his or her own cognitive style was quite unnerving for people from cultures based on pride and shame motivations. This may well be the reason that Kirton found differences between respondents from European and non-European cultures. Instead, the questions were re-phrased to refer to the professional ideal of "an excellent manager." For example,

- The excellent manager masters all details [adaptor].
- The excellent manager needs the stimulation of frequent change [innovator].

Once the questions are posed differently, there is less comparability with the original KAI scale so the issue of European vs. non-European scores cannot be tested.

Despite the change in KAI questions, a comparison between women's and men's responses can be made. In order to encourage women respondents, the test administrator was a woman known to them, a loan officer in a bank. While the relationship between the test administrator and the respondent may bias the answers, it is necessary in Africa to have some relationship in order to elicit cooperation. The social science ideal of the objective investigator with unbiased respondents does not fit well in a society based on strong human bonds.

In this preliminary survey no attempt was made to draw a random sample based on a defined population from which statistically significant inferences could be drawn. Instead the sample consists of owners of businesses that transform a product, such as manufacturing and personal or business services. The sample is divided in the following way:

- five men owning businesses with fewer than ten employees,
- five women owning businesses with fewer than ten employees,
- five men owning businesses with ten or more employees, and
- five women owning businesses with ten or more employees.

A small random sample would not have found enough businesswomen, besides traders, to have filled the category of ten or more employees.

Hypotheses

Most industrial studies distinguish between firms with fewer or more than 10 employees and fewer or more than 50 or 100 employees. The category of 10 employees seems the relevant one in this case, since more than 10 employees implies that the business has hired workers who are not family or former apprentices and so is no longer operating for subsistence. The hypothesis derived from neo-classical economics would be that smaller businesses would be more subject to market competition and would inspire

more innovators, while large businesses would nurture adaptors.

Besides asking questions based on the Kirton Adaptor-Innovator inventory, the questionnaire also gathers information on the owner's firm. It asks the year the firm was founded, the number of employees today, the number of employees when the firm was founded, whether the firm is a corporation, whether relatives work in it, whether the firm does formal planning, what kind of training is needed and what are its major business problems.

Results

The sample of ten women and thirteen men was not randomly selected, so many statistical tests cannot be applied to it. However, correlation coefficients and regressions can indicate relationships within the sample that would support hypotheses for a study using a random sample.

Although the questions were not phrased the same way as in the English version of the KAI, the respondents showed a tendency to answer as adaptors rather than innovators. Out of all responses to the questionnaire 70.4% were adaptor and only 29.6% innovator. As the KAI would predict, the score for adaptors is negatively correlated with the score for innovators (-.18). Adaptors and innovators have different management styles.

Regarding the first hypothesis that family businesses are more likely to score as adaptors, while incorporated firms are more likely to score as innovators, the results confirm it weakly. The owner's score as an adaptor correlated at (0.18) with an index that included family ownership (proprietorship or partnership) and relatives working in the firm. A positive correlation occurred in sub-samples of small and large firms or men's and women's firms, only it became stronger (0.60) for women's firms.

The second hypothesis that incorporated businesses are more likely to have business plans, professional managers and training programs than family businesses is also borne out. Business incorporation legally separates business from family relationships. Corporations in Togo are not giant businesses that might downsize unfeelingly in the way that Americans stereotype corporations. In this sample the Togolese incorporated businesses are slightly smaller in terms of employment but have grown at the same rate or faster than the family businesses.

The third hypothesis that owners of smaller businesses are more likely to score as innovators is supported by the sample. Since the larger businesses are family-run, adaptor skills may be needed. Whether the size of the business is measured by current employment or employment at the time of founding, there are negative correlations (-.36 and -.45 respectively) with innovator scale. The same occurs in firms owned by women or men. Innovator score is negatively correlated with employment growth (-.25), because large firms have grown faster than small firms.

The fourth hypothesis that owners of older businesses are more likely to score as adaptors is supported only by the men. The women's subsample adaptor score is negatively correlated to years (-0.17), while men's is positive (0.36). Most women are in newer, smaller firms, so other influences occur that must be tested in the regressions below.

The fifth hypothesis that men are more likely to score as innovators and women as adaptors in Africa has scant support (correlation 0.12). Since in West Africa a woman in business is socially acceptable, this result is similar to other countries.

The relationship between innovators and job creation is influenced by gender. In this sample men's and women's businesses grew at approximately the same rate, 0.86 jobs per year for women's businesses and 0.76 for men's. When job creation rate is correlated with percentage scores as innovators, women show a negative correlation (-0.30) while men have a positive one (0.32). Women whose businesses grow more in employment have higher percentages of adaptor responses. On the other hand, men whose businesses grow more in employment have higher percentages of innovator responses. In the regressions below the effect of female gender disappears once other variables are included.

Neo-classical theory might predict, though, that employment growth would be brought about by innovators who would find ways to substitute cheap labor for expensive capital. The correlation between increased employment and percentage of innovator responses is negative (-.25). If innovators are employing labor more productively, rather than providing more employment, the social consequences would be unhelpful at this conjuncture. One reason may be that men own businesses with more employees today (correlation 0.17), which also started with more employees (0.31), even though the men's businesses did not hire more in the meantime (0.01) than women's businesses.

To distinguish the influence of gender and business size, some multiple regressions were run. The variable to be predicted is the percentage of responses as an innovator on the KAI. Since the sample of respondents was not a random one, no t-statistics can be derive, though the standard errors are listed under each beta coefficient in parentheses:

$$\begin{aligned} \% \text{Innovator} = & 45.53 - 10.77 \text{ Female} - 1.58 \text{ Employment at startup} \\ & (7.12) \quad (7.75) \quad (0.60) \\ & \text{adj. } R^2=0.28 \end{aligned}$$

$$\begin{aligned} \% \text{Innovator} = & 37.72 - 6.78 \text{ Female} - 0.28 \text{ Employment today} \\ & (6.12) \quad (8.07) \quad (0.15) \\ & \text{adj. } R^2=0.16 \end{aligned}$$

Female owners of the firm may give fewer responses on the KAI as innovators, but once

References

Kirton, Michael *Adaptors and Innovators: Styles of Creativity and Problem Solving* (London: Routledge, 1989).

United Nations Development Programme *Human Development Report 1994* (New York: Oxford University Press).