

“Thought Paper”: The Role of Social Capital in Frontier Capital Markets

#6: “Executing the Resource Generator Technique-Analytical Results Part 1”

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In this paper we introduce results and further interpretations on the basis of the collected data. Our data collection methodology was described, discussed, and criticized in Thought Paper #5 available on the Network Science Center Web Site at www.netscience.usma.edu . This first analytical results paper will begin with general findings concerning white and blue collar workers in all three Frontier Markets: the Dominican Republic, Ghana, and Tanzania. Our second paper will explore general findings relating to gender differences in the three different countries. In each paper the analysis is subdivided into the three different forms (ties) of social contacts. We will publish more detailed analytical results in a future paper. The following results and subsequent analysis are aimed at the more casual reader.

General Findings

Our team has determined that it’s not always the comparison between the two professional categories in a given region that is interesting. We also find striking similarities and differences amongst blue or white collar workers (and also women and men) in the different locations, although these must be scrutinized very carefully. The diverging social and political environment, and difficulties with the data collection process (and hence the data) should be taken into account in any analysis. The small survey population cannot be representative of all layers of the respective society.

Analysis

Despite having data on only seven blue and white collar Ghanaians, six Ghanaian women and three Tanzanian as well as nine white collar workers from the Dominican Republic we included the data in our analysis. The team utilized Google Refine to bring the data in order and summed up all the social resources in its breadth per interviewee (spectrum of available social resources) as well as the diversity of all social resources. The latter consisted of counting all social resources each interviewee claimed he/ she had access to. We also totaled each social resource across the board of respondents (depth) in order to see which resource was most and least represented in our samples. Then, we conducted statistical analysis including Pearson's R and R^2 of the three datasets using Microsoft Excel and R. The confidence intervals were established at 95% probability. Due to the very low number (3) of white collar respondents the analysis of this data has been omitted.

Blue and White Collar General Findings

Comparing the blue collar workers of our three samples, we found that the average number of family members promising access to social capital for the Dominican Republic and Tanzania are the same (3.6 per person) and half thereof of Ghana. This could be ascribed to different definitions of "family" in the specific cultures. In respect to diversity too, the Dominican Republic's interviewees apparently have access to a wider spectrum of social resources than their Ghanaian counterparts. The average interviewed Dominican Republic's blue collar worker appears to have access to the most social resources in all relationships, whereas their Ghanaian counterparts have the least. But when we look at the diversity of the social resources the matter is reversed: The Ghanaian blue collar workers of our sample claim the most diverse social resources and the Dominican Republic's representatives the least. Social capital as it appears in our samples henceforth also follows the idiom that quantity and quality does not always go together.

A most interesting aspect is the comparison between white and blue collar workers. Here we find for our Tanzania and Dominican Republic samples that the

average white collar workers have access to a higher number and more diverse social resources than the average blue collar worker in all ties. Whereas, in Ghana the average white collar worker in our sample surpasses his blue collar counterpart regarding amount and breadth of accessible social resources alone in family and friend circles. The Tanzanian respondents also claimed a much larger number as well as more diversity of potential social resources per person than the white collar workers of the other two samples.

Taking a detailed look at actual social resources, we find that for our study in all three locations the investment in stocks and bonds was amongst the least provided social resource amongst friends (under 1.5%) and in Ghana and the Dominican Republic amongst family members, too (under 2.5%). Other rare social resources in all three locations appear to be “own a vacation home”, “having good contacts with the media”, “being able to lend enough money to purchase a home, or “having obtained a loan from a bank ever before” (generally below 1.5% in each location). Social capital pertaining to social skills and gains like the capability to “have somebody to go shopping in case of sickness” or “people giving good advice on personal or work-related problems” is also sparse for many of the respondents (less than 2% respectively). Probably most importantly in respect to economic development is the fact that only very few social contacts of all respondents know about government regulations or financial matters (less than 3% respectively).

In contrast, most social contacts of all interviewees “knew how to use a computer” (generally more than 10% respectively), are “members of a political party” (more than 15%), “know a lot about sports” (more than 10% in each sample), and are “able to repair household items” (more than 5% in each location).

Blue and White Collar Comparison for the Dominican Republic

In the Dominican Republic, most family members (17.1%) and friends (17.2%) of blue collar workers are politically active. An almost equal amount of the family members of both professional categories “know how to use a computer” (13.5% for white collar

family members and 11.6% for blue collar family members). Friends of both, too, had computer skills (23.0% for friends of white collar workers and a much lower 7.7% for friends of blue collar workers). Unmatched by blue collar social contacts, 8.1% of white collar workers' family members owned a car or spoke a foreign language (7.5%). More than 20 % of the white collar workers' friends earn more than the average worker in the Dominican Republic.

For blue collar family members we found that “good advice on work-related problems” is possibly coupled with “knowledge about government regulations” (Pearson correlation coefficient was computed at 0.8916 (95% confidence interval set between 0.42 and 0.98), R^2 returned a correlation of 0.795). Perhaps this correlation is founded in the possibility that good advice aims at formal solutions to problems in the work place. Another explanation could be that people, who know about government regulations, also have a general interest in obtaining information on guidelines in other areas. “Giving good advice on problems” in the professional realm is also found to highly correlate with being “active in a political party” (Pearson correlation coefficient was computed at 0.9706 (95 % confidence interval set between 0.81 and 0.9958), R^2 returned a correlation of 0.942). Furthermore, in both friends and acquaintances of blue collar workers we find a (for the sample) high correlation between “giving good advice on work-related problems” and the “ability to repair household items” (Pearson correlation coefficients were computed at 0.9977 and 0.9991 respectively, while R^2 was calculated to be 0.9955 and 0.9982 respectively).

For family members of white collar workers “knowing about government regulations” and being a “member of a political party” appears to go hand-in-hand (Pearson correlation coefficient was computed at 0.9823 (95% confidence interval set between 0.88 and 0.9975), R^2 returned a correlation of 0.9649). In accordance with the better financial position of white collar workers, family members “investing in stocks and bonds” were also likely to have been “previously approved for a bank loan” (Pearson correlation coefficient was computed at 0.9748 (95% confidence interval set between 0.94 and 0.99), R^2 returned a correlation of 0.9503). Friends of white collar workers, who “know about government regulations” tend to also “be politically active” (Pearson

correlation coefficient was computed at 0.9595 (95% confidence interval set between 0.90 and 0.98), R^2 returned a correlation of 0.9206). All these findings are non-directional, i.e. we cannot determine whether the knowledge about government regulations is cause or consequence of the membership in a political party. Another interesting finding concerning the friends of white collar workers in the Dominican Republic is the possible triangle forming inter-linkage of “giving good advice on personal as well as work-related problems”, and having “graduated college” (all Pearson correlation coefficients are found to be between 0.9757 and 0.9960 (R^2 respectively calculated to be between 0.9520 and 0.9921)). One possible interpretation could be that friends made during the college years, stay friends long enough to give advice on the entire spectrum of human problems. If this interpretation is correct, the gained data could throw light on otherwise rather elusive social behavior – where do people go with problems or in other words who do they trust the most?

Blue and White Collar Comparison for Ghana

It is not surprising that in Ghana of 2010, 26% of the family members and 31% of the friends of the blue collar sample – the highest amount of social resource in both ties – knew a lot about sports (in this case: soccer). Not only was 2010 the year of the soccer World Cup, but for the first time it was held on the African continent. Though not amongst the family members, but the single highest social resource amongst the friends of our Tanzanian interviewees was “know a lot about sports” as well (20%).

It appears that for blue collar workers in Ghana “owning a vacation home”, “able to lend enough money to purchase a home” and “investing in stocks” is highly correlated (Pearson correlation coefficient as well as R^2 were computed to be 1.0 in the family ties of blue collar workers). Only 2.2 % of the family members in our Ghana study could potentially provide access to any of the three involved social resources. Although this sounds absolutely reasonable for someone with our worldview, the high correlation could be due to the very small number of actual cases in the dataset. Amongst Ghanaian family members of blue collar workers, we also find an equally high

correlation between “knowledge of government regulations” and the “ability to give good advice on work-related problems” (Pearson correlation coefficient as well as R^2 were computed to be 1.0).

Friends of blue collar workers in Ghana appear to follow a possible social stereotype in that people “who have received a loan from a bank” or “know how to use a computer” scored badly with “giving good advice on personal matters” (Pearson correlation coefficient of -0.9467 (95% confidence level is likely to not occur with a probability bound between 0.67 and 0.99) and -0.9950 respectively; R^2 was computed to be 0.8963 and 0.99 respectively). People, who are “able to obtain a bank loan”, were also very likely to “know how to use a computer” (Pearson correlation coefficient was computed at 0.9623 (95% confidence level is likely to occur with a probability bound between 0.76 and 0.99), R^2 was calculated at 0.9261). From occasional and qualitative interviews held with entrepreneurs in Ghana, we learned that it is very difficult to obtain a bank loan. And computer skills are also highly correlated with earning more than the average Ghanaian (Pearson correlation coefficient of 0.995 with a 95% confidence interval computed between more than 0.93 and 0.99). Both social resources thus suggest that they are crucial ingredients to professional success in Ghana, but prevent people who could provide them from being turned to in case of personal distress. The social resource most common among the Ghanaian white collar workers’ family members was the “knowledge of how to handle a computer” (37.63%).

Acquaintances of Ghanaian blue collar workers, who graduated college also tend to know about financial matters, sports (soccer), to give good advice on personal matters, and be acquainted with at least one foreign citizen (Pearson correlation coefficient and R^2 for all of these social resources was computed to be 1.0). Here, too it may be that friends made at college share certain interests and trust each other. As in other countries, colleges in Ghana may also provide a rare arena to meet students from other countries.

White collar family members in Ghana, who “know a lot about sports” appear to “know about government regulations” (negative Pearson correlation coefficient of -0.8839, 95% confidence interval between 0.7249 and 0.9535; R^2 was computed to be

0.7813). On a more professional level family members of white collar Ghanaians tended to “be able to extend a job offer” also appeared to “have been approved for a bank loan before” (Pearson correlation coefficient 0.8911, 95 %confidence interval of 0.7406 and 0.9565, R^2 0.7941). Getting a bank loan – as mentioned earlier – is not easy in Ghana. It is therefore not surprising, that possible employers (as business owners) amongst the relatives of our interviewees have previously been approved for such loans. Furthermore, relatives, who “know how to use a computer” tend to also be members of a professional or social club (Pearson correlation coefficient 0.9212, 95% confidence interval of 0.8081 and 0.9688, R^2 0.8487). This correlation could potentially be conclusive about the status of computer skills on the Ghanaian job market. How many jobs require knowledge about computers? How many job applicants for a position in which computer skills are necessary, fulfill that requirement? What does it take to obtain these computer skills in Ghana and in what ways do Ghanaians expand this knowledge?

High correlations¹ among three social resources, may suggest that contemporarily most of the college graduates earn more than the average Ghanaian and invest part of that money in stocks. Besides graduating from college, being an “active member of a political party” appears to promise some success. Friends of white collar workers who “could offer a job” tend to be also politically active (Pearson’s correlation coefficient of 0.9444 (95%confidence interval o 0.8622 and 0.9781) and R^2 at 0.8920).

Correlations Between Income and Individual Social Resources

We find only few and then relatively low correlations between income and social resources. In Ghana owning a (new) car is associated with wealth and the Pearson correlation coefficient for our blue collar worker sample between car and income was calculated at 0.8047, although an 85% confidence interval still returned a probability of this statement being true between 37 and 95 per cent. The income of white collar family

¹ College Graduation and Higher-Than-Average Income – Pearson correlation coefficient was computed at 0.8807 (95% confidence interval of 0.7180 and 0.9521); R^2 was calculated at 0.7756; Investment in Stocks and Higher-Than-Average Income - Pearson correlation coefficient and R^2 were computed at 1.0; Investment in Stocks and College Graduation - Pearson correlation coefficient was computed at 0.8807 as well (95% confidence interval of 0.7180 and 0.9521); R^2 was calculated at 0.7756 as well

members appears to correlate with college graduation (Pearson correlation coefficient 0.8629, 95% confidence interval of 0.68 and 0.9447, R^2 0.7447) and with the knowledge of government regulations (Pearson correlation coefficient 0.8584, 95% confidence interval of 0.67 and 0.9428, R^2 0.7368). Still in Ghana, we find a slight negative correlation for friends of white collar workers between income and the “ability to lend enough money to purchase a home” (Pearson correlation coefficient -0.814, 95% confidence interval of 0.58 and 0.9238, R^2 0.6626).

Blue and White Collar Comparison for Tanzanian Sample

In Tanzania, white collar worker’s social contacts are more likely to be members of social networking sites or of professional or social clubs than social contacts of blue collar workers.

Similar to social resources provided in Ghana by white collar workers’ friends, relatives of blue collar workers in Tanzania, who graduated from college tend be “possible job-offerers” and appear to “invest in stocks².” These correlations suggest that a college education is a good precondition for professional success in Tanzania, as well. Relatives of blue collar workers who have “good contacts with the media”, also appear to “know more about financial matters” (Pearson correlation coefficient for of 0.9159 (95% confidence interval of 0.7960 and 0.9666), R^2 of 0.8389) and “know government regulations” (Pearson correlation coefficient of 0.9332 (95 %confidence interval of 0.8359 and 0.9736), R^2 of 0.88). A possible interpretation that could be traced in the Tanzanian job market could be that these social resources may be sought after skills, though the correlation of each with higher-than-average income is not remarkable.

Friends of Tanzanian blue collar workers, also appear to couple “knowledge of government regulations” and “knowledge about financial matters” (Pearson correlation coefficient of 0.9806 (95% confidence interval of 0.9506 and 0.9925), R^2 of 0.9616).

² College Graduation and Stock Investment – Pearson correlation coefficient was computed at 0.8924 (95% confidence interval of 0.7435 and 0.957); R^2 was calculated at 0.7964; Investment in Stocks and Job Offer - Pearson correlation coefficient was computed at 0.8925 (95% confidence interval of 0.7437 and 0.957); R^2 was calculated at 0.7966, Job Offer and College Graduation - Pearson correlation coefficient was computed at 0.9085 as well (95% confidence interval of 0.7793 and 0.9636); R^2 was calculated at 0.8253 as well

Interestingly, we also find a high correlation between both of these topics and the ability to “lend enough money to purchase a home” (Pearson correlation coefficient of 0.9553³ with knowledge about financial matters and 0.9427⁴ with knowledge about government regulations, R^2 of 0.9125 and 0.8887 respectively).

We find the same inter-linkage of these social resources amongst acquaintances of Tanzanian blue collar workers to an even higher degree: The knowledge about government regulations correlates with knowledge about financial matters (Pearson correlation coefficient of 0.9781 (95 % confidence interval of 0.9443 and 0.9915), R^2 of 0.9567) and so does the ability of purchasing a home for someone with the latter two (Pearson correlation coefficient of 0.9749 (95% confidence interval of 0.9363 and 0.9902), R^2 of 0.9504; Pearson correlation coefficient of 0.9977, R^2 of 0.9997). Acquaintances that are “knowledgeable in financial matters”, also tend to “give good advice on work-related problems” (Pearson correlation coefficient of 0.9832 (95% confidence interval at 0.9571 and 0.9935), R^2 of 0.9666). This too suggests that formal information might solve most work-related problems.

Conclusion

In this first section of our analysis of the Frontier Market Resource Generator data we have discovered several interesting findings relating to the relationships of white and blue collar workers and their access to social capital. Our next paper will analyze gender access to social capital and then we will follow that paper with a series of recommendations to improve analysis of social capital.

³ Corresponding 95% confidence interval of 0.8883 and 0.9825

⁴ Corresponding 95% confidence interval of 0.8582 and 0.9775

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