Status report at Year 3

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At the end of the second year, an outline of the three chapters to be pursued were presented to the department . In this outline, the first chapter included the empirical view of status consumption in the sub-Saharan Africa; the second chapter attempted to develop a theory for status consumption that would allow a comparison of status consumption across developed and developing economies while the third (and the last) chapter outlined a behavioural experiment that would attempt to measure the association of status with purchases.

The structure of the chapters in the study has remained the same - but significant parts of Chapter 1 and 2 have been reworked after noting that the link between empirical work and the outline of the theory in Chapter 2 had not been very clear in the report last year. The reason why this link was missing was that both Chapters 1 and 2 had been under progress at the time. A full empirical test of the elements of theory developed in the chapter 2 may still appear somewhat ambitious, but the significant amount of work added to Chapter 1 now links with the claims of the theory relevant to cross-sectional data. Providing empirical methods for theoretical elements being a key part of our study, we have focused on presenting empirical methods for budget analysis relevant to status consumption instead of expanding the theory outlined in Chapter 2.

To ensure the rigour of the work - the PhD candidate has taken to acquiring a deeper mathematical understanding of the mathematical methods in econometrics. The advisors have been notified of this intent and thus a few math courses were planned to be audited for this activity (*Functional Analysis* has been audited in 2018 and *Measure Theory* may be taken up in due course). As planned in the year 2 report, the candidate was also engaged in the *Advanced Micreconomics* course - which allowed him to revise the basic Nash equilibrium concepts. The course being a preliminary one, he was also advised by Dr. Ferdinand Vieider to attend the *Behavioural Economics* course in the subsequent semester. In light of the work done on empirical methods during the year 2017, advanced game theory is no longer a dependency for the empirical work to be used in Chapters 1 and 2. That said, the *Behavioural Economics* course and the books recommended by Dr. Vieider are set to benefit the development of Chapter 3 in the near future.

As part of the activity that was taken up to clarify Chapter 1 after Aug 2017, it was found that the theory of selection of status items by the representative consumer was based on some heuristic arguments and suffered with the issue of circular definitions. It even appeared that the items of consumption that showed disparity amongst its consumers were simply declared as status items in the study. This seemed arbitrary and was thus deemed problematic. The discussant of the 2017 workshop (Dr. Minyan Zhu) in fact highlighted this problem as well and suggested that a selection model should be adopted to classify status providing goods. Since then, the methodology to define a status product (whose consumption is sought as a status providing product) has been refined. To conduct this refinement, an empirical understanding of the literature on demand analysis - particularly, the conditions that a demand function must fulfill - was acquired. By Dec 2017, separability of the utility function was found to be a key idea to base the notion of status consumption upon. In the current state of the report, the idea of separability aligns the model of status with both the literature on empirical work in visible consumption and the immense literature on demand analysis. The selection approach suggested by the discussant in 2017 has also been included - as it is observed that many consumers don't have access to any items that may carry status. The writeup on Chapter 1 is currently under review and should benefit from the discussion in the Phd Workshop for 2018.

Apart from the work done in Chapter 1, new opportunities in the theoretical work for Chapter 2 have been identified. A clarity on the link between empirical work and theory has helped in separating out the data requirements for Chapter 1 and in planning the details of Chapter 2. At this point, the empirical work emanating from new directions in Chapter 2 would rely on time-series data - an activity that would be taken up in the current year.

It was also found that many ideas that seemed promising in the beginning were either no longer relevant or became encapsulated into other parts of the work. For example, the Chapters 1 and 2 had discussed the measures for bandgwagon effect in the Year 2 report but in the current year, these measures were discarded as irrelevant in a cross-sectional setting. The clarity to reject this effect was achieved only in the light of the separability based model that has been adopted in the Year 3.

These developments in Chapter 1 and 2 have not been without problems. The unavailability of quantities recorded for all non-food expenditures has prevented us from comparing quantities consumed of similar items. Further, since the cost recorded for consumption is based on recall methods while the food items are recorded using the diary method, any claim of relative preference of categories must consider the measurement error arising out of this disparity. In general, any arguments that rely on the complete consumption basket, would suffer with the lack of availability of detailed microdata in sub-Saharan African countries. This is why methods for aggregation over consumption categories is critical to the current work.

If the current cross-sectional study in Chapter 1 looks nearly satisfactory, then the empirical methods for time-series version of the extended model of Chapter 2 should be finished in the next year. This may imply that the reverse game theory experiments planned in Chapter 3 would require some work beyond Year 4. If we were compelled to finish the study by Year 4, then we may redefine the scope of the study after the Chapter 2 is finalised - so that a comparison between developed and developing countries can be pursued as a chapter in itself. At this point, the aim to finish the three chapters as outlined in the Year 2 report has not changed. An understanding of the inverse game theory acquired after taking the *Behavioural Economics* course - may provide a better idea of the effort required to complete Chapter 3 and help us with the planning the remaining work necessary for the last Chapter of the study.