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The Economics of Pre-Hispanic Visayan Slave Raiding

Henry M. Schwalbenberg



Through the work of William Henry Scott, I have become fascinated with the structure of life in the Philippines prior to the Spanish conquest. Of particular interest to an economist concerned with issues of efficiency and equity is the pre-hispanic Visayan institution of slave raiding, a Philippine institution not without modern day parallels. Warren (1982) discusses Philippine slave raiding in the nineteenth century. The pre-hispanic Visayan economy was a system of exploitation based on the relative immobility of labor. Normally the immobility of labor or any other essential factor of production would create enormous inefficiencies in an economy. But, in the case of pre-hispanic Visayan society, these inefficiencies, I will argue, were largely mitigated by the institution of sea-borne slave-raiding. Hence, the old Visayan elite were in quite an enviable position. They were able to exploit their society without crippling its productive foundation. Clearly, later leaders in the Philippines and elsewhere might have fared far better had they been as sophisticated in their economics as the pre-hispanic elite of the Visayas.

Pre-Hispanic Visayan Economy

Visayan society was based on a primitive economy composed of slash and burn subsistence farming, forest gathering, and fishing (Scott 1990). A modern economist would view their economy as combining scarce human labor (L) with a fixed but abundant base of natural resources (R) to provide an annual flow of goods (G), primarily food.

The original ideas behind this paper were developed during a series of lectures given under the auspices of the Economics Department, Ateneo de Manila University. Partial funding for this research was made possible by a Fordham University Faculty Research Grant.

The output of a typical Visayan village would vary according to population size. This relationship between the output of goods and the size of the labor force normally referred to by economists as the production function is depicted in figure 1. Figure 1 indicates that, given a fixed amount of natural resources, increases in the labor force would cause output to increase initially at a quick pace but eventually, due to diminishing returns, at a much slower pace. This idea of diminishing returns is a fundamental concept in economics and is what underlies most of the conclusions of this paper.

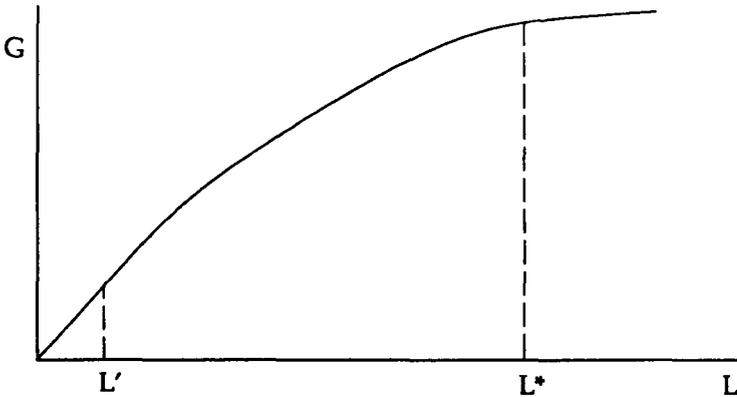


Figure 1. Village output as a function of labor input

Based on such a view of the production possibilities of a village, we can in turn examine labor productivity. Formally called the marginal productivity of labor (MPL), labor productivity is defined as the additional output of goods (G) generated by the employment of one additional worker (L). From figure 1 we can determine that, due to diminishing returns, labor productivity is high when labor is scarce. For example, consider the case in figure 1 when there are few workers (L'). We see that the slope of the production function is steep implying that an additional increase in labor will yield a large increase in output. But now consider the case in figure 1 when there are many workers (L^*). We see that the slope of the production function is much flatter, implying that due to diminishing returns an additional increase in labor will yield only a small increase in output. These results demonstrate that, given a fixed resource base, labor productivity will decline as the size of the labor force increases. Figure 2 graphically depicts this inverse relationship between labor productivity (MP_L) and the size of the labor force (L).

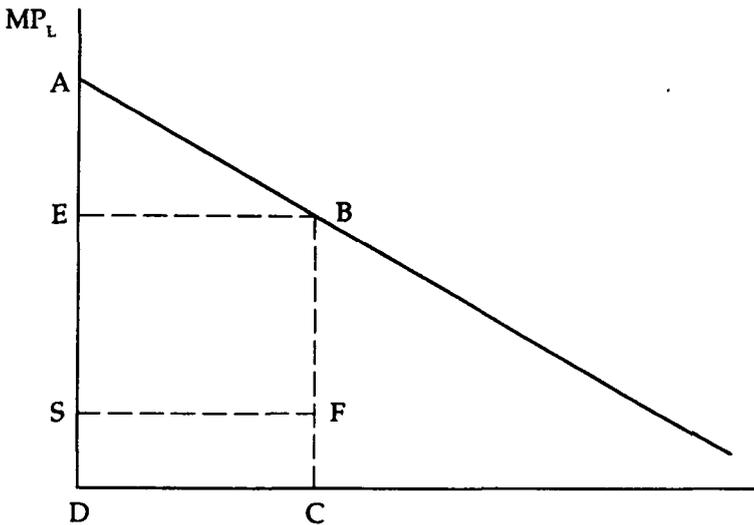


Figure 2. Labor productivity as a function of labor input

Prior to Western contact, and even up until the close of the nineteenth century, labor was scarce relative to natural resources in the Philippines. As depicted in figure 2, labor scarcity would imply that labor productivity in a typical pre-hispanic Visayan village would have been very high. Such high labor productivity as we will see was an essential prerequisite for the existence of Visayan society as it was organized prior to the Spanish conquest.

Economic Exploitation and Social Stratification

Besides a concern with the mechanics of production, economists are equally concerned with distribution. In figure 2, point C represents the total village labor force, point A is the output generated by the first employed laborer, while point B is the additional output generated by the last employed laborer. The area under the productivity curve (ABCD) therefore represents the summation of the outputs of each worker from the first to the last. As a whole this area is equal to the total output (G) of the village. The question we must now answer is how much of this output remained with the workers to compensate them for their labor.

To explain labor compensation we must consider two related questions—how valuable were those workers and what power did they hold. Clearly, because of the scarcity of labor and its resulting high productivity, labor was an essential resource and was extremely valuable in this society. But as was true in almost all pre-industrial civilizations, labor in Visayan society had little if any clout to demand compensation on a basis commensurate with its contribution.

From an economic perspective, pre-hispanic Visayan society consisted of two classes: a productive class and a nonproductive class. The productive class, called *oripun*, were for the most part workers who provided the scarce labor needed for this economy. While the nonproductive class, consisting of the ruling *datu* and his family as well as a warrior class called the *timawa*, subsisted on tribute collected from the *oripun*. If the *datu* and the *timawa* did not collude among themselves and had to compete against one another for the valuable economic services of the *oripun* while the *oripun* were free to choose the best offers, then the *oripun* would be able to insure that they received compensation related to their high economic worth. Most likely each individual laborer under this scenario would have received an income equal to the marginal productivity of labor (point E in figure 2), namely the lost output due to not having the services of the last employed worker. This result implies that out of the total output, area EBCD would remain with the *oripun*, with the remaining area ABE turned over as tribute to the *datu* and the *timawa*.

But if the Visayan elite colluded among themselves and held a monopoly over the jobs available to the *oripun*, then this elite would be able to drive labor compensation down to subsistence levels. Unfortunately for the *oripun*, the historical record shows that their choice of employer was severely restricted. For the most part they were bound into life long patron-client relationships through debt obligation (Scott 1980). With few options, almost all workers in this society would be forced to accept an income equivalent to a subsistence wage (depicted as point S in figure 2). This subsistence wage would represent an income marginally better than what a worker would expect to receive if he reneged on all his debt obligations, left the community, and attempted to scrape out a subsistence livelihood in the hinterland away from the influence and control of the Visayan elite. Given this much lower income per worker, it follows that out of the total output, only the area SFCD would now remain with the *oripun*, with the much larger remaining area ABFS now turned over as a tribute to the *datu* and the *timawa*.

By severely restricting labor freedom and mobility through community enforced debt bondage, the Visayan elite were in a position to extract a significantly larger tribute from their highly productive workers.

The Economic Crisis

Due to a combination of high labor productivity and labor immobility, the oripun could produce a large surplus to support their overlords. But inherent in this economic system was a contradiction. While a high degree of labor immobility helped to assure a large surplus, it also prevented the efficient allocation of labor. For example, consider two Visayan villages that have the same labor force, but one has a better resource base. Labor productivity is depicted for each of these villages in figure 3.

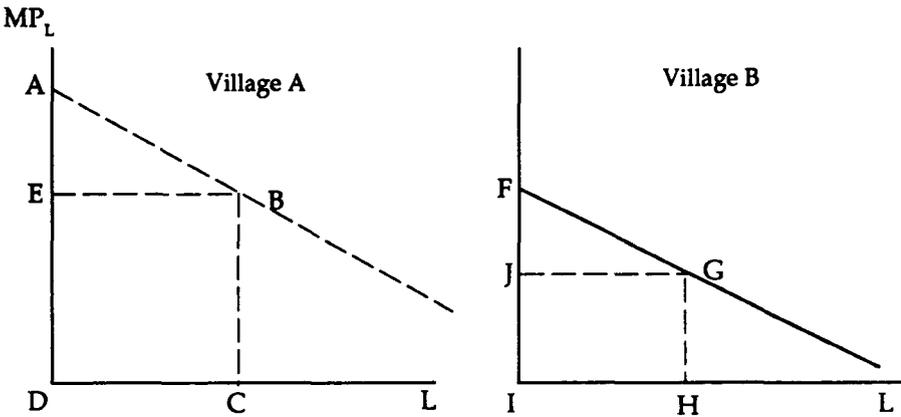


Figure 3. Comparative labor productivity between villages without labor mobility

Given that village A has the better resource base with the same labor force, figure 3 indicates that labor productivity in village A (point E) exceeds labor productivity in village B (point J). Total output in village A equals the area ABCD, while total output in village B equals the area FGHI. Such an allocation of workers between the two villages is inefficient. For example, if workers were paid a wage equal to the value of their productivity and if they were free to work in the village that paid the higher wage, then we would expect workers from village B to migrate to village A. Workers in effect would

be migrating to a village where they would be put to more productive use.

As workers left village B, however, labor would become scarce raising labor productivity as well as wages. But as workers entered village A, labor would become more abundant, lowering labor productivity as well as wages. Eventually labor mobility would bring about wage equalization as illustrated in figure 4. At this point wages and productivity in village A would have fallen to point E' while wages and productivity in village B have risen to point J' where E' is equal to J' . The labor force in village A has increased to C' while the labor force in village B has decreased to H' . Total output in village A has increased to the area $AB'C'D$ while total output in village B has decreased to the area $FG'H'I$. What is extremely significant to note is that the increase in output in village A outweighs the decrease in output in village B. Therefore, since labor is more efficiently allocated, the combined total output of the two villages have increased and society as a whole is better off from an economic perspective.

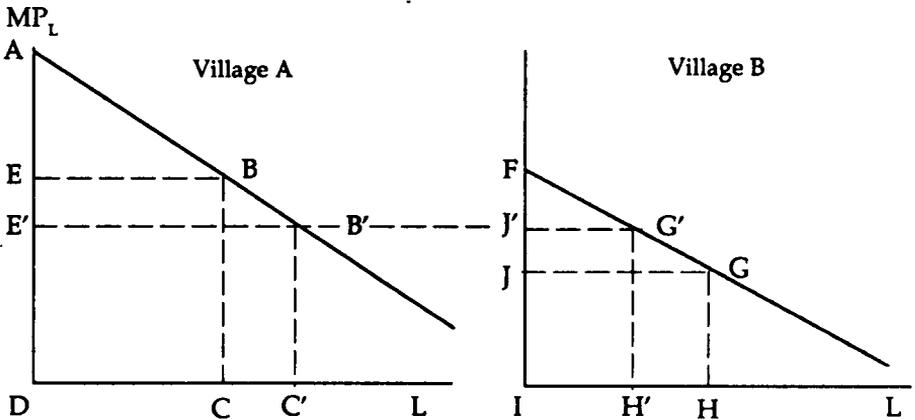


Figure 4. Comparative labor productivity between villages with labor mobility

While debt bondage and the labor immobility it engendered enabled the Visayan elite to collect a much larger tribute, it would also prevent the efficient allocation of labor. Since labor was neither rewarded according to its productivity nor able to move freely in search of better opportunities, Visayan society desperately needed an alternative mechanism to allocate labor efficiently and prevent eventual economic decline. Otherwise the long term survival of Visayan society and implicitly the rule of the Visayan elite would be problematic.

The Economic Role of Slave Raiding

To maintain an exploitative system based on bonding laborers to their patrons, while at the same time mitigating the negative effects of such labor immobility on economic production, Visayan society resorted to sea-borne slave raiding as an economic institution to efficiently allocate scarce labor among the Visayan islands.

While the *timawa*, the warrior class, were not directly engaged in the production of goods, this class did have a very important economic rationale. The purpose of their sea-borne raids was to obtain what was scarce in their society, namely human labor (Scott 1982). Those captured in raids were added to the village's *oripun*, the productive agricultural class.

Now once again consider figure 3. The datu of village A, having a larger surplus, would be in a position to support a larger fighting force of warriors and a larger number of fast and maneuverable raiding vessels (*caracoas*) than village B. Should the datu of village A send his warriors to attack village B, he probably would be able to successfully raid it and forcibly transfer workers from village B to his own village A. In this way slave raiding played an analogous role to a competitive labor market. Instead of offering higher wages, a resource rich village would be able to support a larger warrior class and in turn forcibly transfer workers from areas with a lower resource base.

After enough laborers were captured and transferred to village A we would eventually achieve the situation depicted in figure 4 where labor productivity is the same in both villages. At this point labor is allocated in the most efficient way, maximizing the joint production of the two villages. Any further transfer of labor would reduce overall output. But we see that village A has continuously increased its surplus at the expense of village B, and therefore is still in a position to forcibly extract resources from village B. What we observe from the historical record that would fit this situation is the use of ransoming. When village A captures members of village B, village B has the option of ransoming these captives. In economic turns ransoming would only occur when the person is more productive where he is then where he would be transferred to so that it becomes possible to make a deal. So once enough workers have been transferred so that labor productivities are equalized and the joint output of the two villages are maximized we would expect ransoming

to occur. Instead of transferring workers, now a portion of the surplus from village B would be transferred to village A. In effect village B would become a vassal and pay tribute to village A.

Political Expediency and Empire Building

The next point to be noted is who carries the burden of these intra-village transfers. Since workers' compensation has already been forced down to the subsistence level, their compensation would remain unchanged. Rather it is the elite of village B who would be forced in effect to give over a portion of their tribute to the elite of the militarily superior village A. This burden shows that while we have solved the economic problem, we might still have a political problem. The defeated elite might become progressively alienated from their conquerors, laying the seeds for eventual unrest.

To resolve this problem we know from the historical record that the *timawa*, the warrior class, could transfer allegiance between *datus* (Scott 1980). Given their inferior position, eventually the warrior-elite of village B would find it in their economic interest to transfer their allegiance to the *datu* of village A. In this way the two villages would not only become economically integrated but also politically unified. Now village A would yield the combined military and economic strength of both villages setting the stage for greater conquests.

Such a system, if left to its own, might eventually lead to complete political consolidation of the Visayan islands. Perhaps a similar political, economic, and social system can explain the rise of some of the ancient Southeast Asian empires such as Sriwijaya and Kampuchea. But such political consolidation did not occur in the Visayas and our theory must also be able to explain this fact.

An obvious explanation is geography. Unlike the ancient Southeast Asian kingdoms of Sriwijaya and Kampuchea, whose empires for the most part consisted of adjacent villages, Visayans needed to project their military power across relatively large distances of open water. Therefore it seems plausible that the military power of a Visayan village not only depended on its economic base but also on its geographical location. As already discussed, the economic surplus generated by the workers of a Visayan village would determine the size and strength of its warrior force. It seems obvious, however, that the further the distance that this force had to be projected the more

isolated it would become from its economic support base. It therefore seems possible that a weaker village could hold off a much more powerful village provided it was sufficiently distant from the powerful village. In this way it seems that the archipelago nature of the Visayan islands mitigated against complete political consolidation as well as complete economic integration.

Conclusion

Using basic economic concepts taught in introductory undergraduate economics courses, primarily diminishing returns and marginal productivity, I have attempted to explain and link some of the historical facts that we do know about pre-hispanic Visayan society. In particular, the stratified class structure of patron-client relationships was seen to limit labor mobility and increase the economic surplus that the elite class could extract from the laboring class. The institution of sea-borne slave raiding was seen to play a fundamental economic role in limiting the economic inefficiencies of an exploitative system. And finally, the economic incentives behind the tradition of political expediency where warrior-elites could transfer their allegiance were explained.

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