

CAPITOLO 1

I CONCETTI FONDAMENTALI E LO STATO PATRIMONIALE

Baron Coburg

Note: *This case is unchanged from the Tenth Edition. It is adapted from an “academic note,” written by W.T. Andrews of Guilford College, that appeared in the April 1974 Accounting Review. Parts of this commentary are adapted from Professor Andrews’s note.*

Approach

This case enables a student to discover a number of important accounting concepts that are described in detail in Chapters 2 and 3 and 4. The students also discover intuitively—and of necessity—the relationship between two balance sheet “snapshots” and the income statement for the intervening period. In general, the case illustrates the usefulness of the accounting function: It would be almost impossible to compare the two performances without the logical structure of accounting.

Some instructors will prefer to have students read and briefly discuss this case near the end of one class, identifying the basic problems of the case—what measurement unit is to be used, what the entities are and who their owner(s) is (are), what a balance sheet shows, what an income statement shows, and how relative performance might be measured. Then the next class can be devoted to discussing proposed statements. Other instructors will prefer to assign the case without any suggestions as to how a student should attack the problem. (I personally favor the latter approach, whereas Professor Andrews suggests the former.) I find that the case works well not only with beginning students, but also in management development programs where there are several experienced accountants in the group.

Comments on Questions

The first issue confronted by the students is the definition of the entity. As Question 1 implies, each plot can be regarded as an entity, even though both plots are owned by the Baron. (Students should realize this earlier because the Baron is referred to as a “landlord,” or because they recall something about feudalism from a medieval history course.) The definition of separate entities is needed in order to compare their economic results.

The second matter students must resolve is the basis of *measurement*. Although this is referred to as the *money* measurement concept in Chapter 2, this case illustrates that a barter-equivalent measurement unit—here, bushels of wheat—could also be used as a common denominator to value unlike things; a monetary unit is simply easier to use in most instances.

Third, students must decide the basis of valuation. This issue arises most clearly in the case of the land, which is said to be “worth” five bushels of wheat per acre. At this early stage, most students will value the land at this amount per acre; but Chapter 2 will explain that assets are usually valued at *acquisition cost*, not current value. Of course, the acquisition cost is indeterminable in this instance, so the Baron’s appraisal is the only available valuation basis. Similar comments apply to the oxen.

At this point, development of the balance sheet can begin. I find it useful to develop an intuitive concept of an asset, and then say that as each asset is valued, we will also record who provided the financing for the asset, and who, therefore, has a claim (equity) against the entity’s assets. This leads to the beginning balance sheets for the farms, as shown below.

Note that I have not called the Plot worked by Ivan “Ivan’s Plot,” because that might suggest to a student that Ivan owns the Plot. Also, the balance sheet status report must show the date at which the status “snapshot” was taken. Since the Baron has given (i.e., contributed) the assets, all of the equities are his. I have not included the plows, assuming that the “snapshots” were taken as the farmers left the castle. It is useful, even if no student raises the question, to ask how the balance sheets would differ if the “snapshots” were taken after a plow had been acquired for each farm.

BALANCE SHEET FOR PLOT WORKED BY IVAN

As of the Beginning of the Growing Season

<u>Assets</u>		<u>Equities</u>	
Seed.....	20 bu.	Baron’s equity.....	<u>162</u> bu.
Fertilizer.....	2		
Ox.....	40		
Land.....	<u>100</u>		
Total.....	<u>162</u> bu.	Total.....	<u>162</u> bu.

BALANCE SHEET FOR PLOT WORKED BY FREDERICK

As of the Beginning of the Growing Season

<u>Assets</u>		<u>Equities</u>	
Seed.....	10bu.	Baron’s equity.....	<u>101</u> bu.
Fertilizer.....	1		
Ox.....	40		
Land.....	<u>50</u>		
Total.....	<u>101</u> bu.	Total.....	<u>101</u> bu.

BALANCE SHEET FOR PLOT WORKED BY IVAN

As of the End of the Growing Season

<u>Assets</u>		<u>Equities</u>	
Ox.....	36 bu.	Payable to Feyador.....	3 bu.
Land.....	100	Baron’s equity:	
Wheat.....	223	Contributed capital.....	162
Plow.....	<u>0</u>	Retained earnings.....	<u>194</u>
Total.....	<u>359</u> bu.	Total.....	<u>359</u> bu.

BALANCE SHEET FOR PLOT WORKED BY FREDERICK

As of the End of the Growing Season

<u>Assets</u>		<u>Equities</u>	
Ox.....	36 bu.	Baron’s equity:	
Land.....	50	Contributed capital.....	101 bu.
Wheat.....	105	Retained earnings.....	<u>92</u>
Plow.....	<u>2</u>	Total.....	<u>193</u> bu.
Total.....	<u>193</u> bu.		

Next, the ending balance sheets can be prepared. This will raise the notion of *depreciation*. Most students will intuit the write-down of each ox from 40 bushels to 36 bushels, since each has a useful life of 10 years. The broken down plow used by Ivan will be more troublesome, especially since it hasn’t been paid for. I ask students to ignore for the moment how this plow was financed; does the plow have any further

value to the farm? They then see that it should be valued at zero, though it's not a bad idea to show it on the balance sheet, since it has not yet been disposed of. The plow used by Frederick is treated analogously to the oxen.

On the equities side, the three bushels owed to Feyador introduce the concept of a liability and raise the distinction between a liability and owners' equity. Presumably, Ivan has incurred this liability as the Baron's agent; i.e., it is the entity's obligation, not a personal debt of Ivan. We also can distinguish between the Baron's initial equity, now labeled "contributed capital," and the earnings thus far retained on the farm ("in the entity"). At this stage, I introduce the *dual aspect* concept and treat retained earnings as a "plug" (i.e., balancing) amount. This gives the ending balance sheets that appear on page 3 of this manual.

Next, I suggest we try to explain why the Baron's equity (specifically, retained earnings) increased by 194 bushels and 92 bushels for the respective farms. Thus, students see at the start of the course that flow statements "articulate" with the beginning and ending status reports. Our explanation of this change will be called, of course, an income statement.

It is important to bring out how production assets (as opposed to monetary assets) become expenses as the assets provide their utility. This is straightforward for the seed and fertilizer but less so for oxen and plows. Also, students need to see that some of the wheat production has been distributed to the plowmaker and to the owner, with the result that these production amounts are larger than those shown for Wheat on the ending balance sheet. I also point out that although we have treated the wheat produced as revenues, in practice, revenues are usually based on goods sold, not goods produced. (As a matter of fact, the "production method" is permissible for certain readily marketable commodity items, such as wheat, as described in Chapter 5.)

The case makes no mention of payments to the peasants for their services ("labor expense") I point out that this would reduce Wheat and Retained earnings on the balance sheet and would increase production expenses on the income statement.

Note that the income statements are labeled with the applicable *time period*. The distinction between expenses and owners' drawings (or "dividends") should be explained.

(Income statements appear on page 26 of this manual.)

At this point, we can discuss performance comparisons. How should we determine which was the "better" plot? The plot worked by Ivan produced 1.76 as much wheat as the plot worked by Frederick; but the former had twice as much acreage. (Since both plots had the same value per acre, one can reasonably presume that they were potentially equally productive.) This raises the concept of *return on investment*. Treating beginning assets (which in this case also equals beginning owners' equity) as the investment base, the plot worked by Ivan returned 132 percent (214 divided by 162), whereas the plot worked by Frederick had an ROI of 121 percent (122 divided by 101). This seems paradoxical, since the first plot returned only 10.7 bushels per acre, whereas the second returned 12.2 bushels per acre. The explanation lies in the fact that Ivan used "his" ox twice as productively as did Frederick. I then ask students to pretend that "half an ox" could have been acquired for use on Frederick's plot, and then adjust the ROI fraction. Adding 2 to the numerator (2 bushels less depreciation expense) and subtracting 20 from the denominator (half the cost of an ox) gives ROI of 153 percent (124 divided by 81). This vividly illustrates the impact on ROI (121 vs. 153 percent) of operating with excess production capacity.

If a student should raise “profit margin” as a comparison criterion, this enables pointing out the fallacy of this measure, even in this case where the entities are engaged in identical endeavors (the same industry). Ivan’s margin was 88.1 percent, Frederick’s was 88.4 percent; again, the plot worked by Ivan had better performance (ROI), despite having a slightly lower margin, because of better utilization of the ox.

Note, however, that this ox utilization was out of the peasants’ control. Thus, Ivan was not necessarily a better farmer than Frederick. This points up the difference between evaluating the economic performance of an entity and the performance of its manager, a distinction emphasized in Part 2 of the text.

**INCOME STATEMENT FOR PLOT WORKED BY IVAN
FOR THE GROWING SEASON**

Wheat produced	243 bu.
Production expenses:	
Seed.....	20 bu.
Fertilizer.....	2
Ox usage.....	4
Plow usage	<u>3</u>
Earnings	214
Withdrawn by owner	<u>20</u>
Increase in retained earnings.....	<u>194</u> bu.

**INCOME STATEMENT FOR PLOT WORKED BY FREDERICK
FOR THE GROWING SEASON**

Wheat produced	138 bu.
Production expenses:	
Seed.....	10 bu.
Fertilizer.....	1
Ox usage.....	4
Plow usage	<u>1</u>
Earnings	212
Withdrawn by owner	<u>30</u>
Increase in retained earnings.....	<u>92</u> bu.