



# VALUE OF THE FIRM

Shyam Sunder, Yale University

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# National Income

- National income may be defined provisionally as the net total of commodities and services (economic goods) produced by the people comprising a nation;
- As the total of such goods received by the nation's individual members in return for their assistance in producing commodities and services;
- As the total of goods consumed by these individuals out of the receipts thus earned, or
- As the net total of desirable events enjoyed by the same individuals in their double capacity as producers and consumers. Simon Kuznets

# Appraisal of National Economy

- "...National income is the end product of a country's economic activity, reflecting the combined play of economic forces and serving to appraise the prevailing economic organization in terms of its returns."
- Simon Kuznets

# Why The Firm?

- Barnard, Simon, Cyert, March: Alliance among people who want to do better than they could do alone
- Coase: Economize on transaction costs
- Demsetz: Team production
- Common theme: Generate surplus (excess of resources generated over opportunity costs of resources contributed)

# Who Gets the Goodies?

- How is this surplus allocated among agents?
- The answer depends on alternative theories of the firm
- Simon (1952) analyzed neoclassical firm (F) and contract or organizational (O) theories

# Neoclassical Firm

- Firm is the instrument of the owner-entrepreneur
- Every other agent gets the marginal opportunity cost of the resource he/she contributes (i.e. no goodies at the margin)
  - All these factor markets are assumed to be perfectly competitive
- All the surplus goes to the owner-entrepreneur
- Value of the firm is the discounted present value of cash flows to the owner
- $IRR = O.C. \text{ of capital} \Rightarrow \text{zero value}$

# Contract or Organization Theory

If the total surplus is negative the firm is infeasible; redesign the contracts or shut down

- If the total surplus is zero, there is a unique distribution in which everyone gets zero surplus
- If the total surplus is positive, there are multiple feasible allocations. There is no basis for choosing one allocation over another. Therefore, the distribution of surplus among agents is undetermined

# Which View More Useful for Accounting?

- How we think about the firm is a major determinant of what kinds of accounting and reporting we do
- Mergers and acquisitions: theories, evidence, and controversies
- Shareholder value as a yardstick for financial reporting standards
- Prisoners of our perspective and data
- Consider alternative views, measures, theories and evidence

# Accounting Model

- Accounting reports modeled after neoclassical view of the firm
- Treat all as costs all factors other than the equity capital
- Focus on net income to the shareholder
  - Residual income subtracts the cost of equity capital focuses on surplus
- Corresponding focus on shareholder value as the stock variable of interest

# Contract View of Accounting

- Each agent gets an income from the firm (share of the surplus = value of inducements less O.C. of contributions)
- Negotiated ex ante (hopefully positive)
- Income stream to each agent can be capitalized to get the value of the firm to each agent after considering the chances and time horizon of its continuation
- Special informational role of income and value to the shareholder as a residual



# A Brief Detour

- Am I talking about “social accounting?”
- Yes, there are some common elements
- But it differs in perspective
- Let us do a brief overview of social accounting

# Social Accounting

- Also called socioeconomic accounting, social responsibility accounting and social audit
- Measure and report efforts, achievements and impact of firms on “social” dimensions
- E.g., energy conservation, minority hiring, environmental preservation, support of community organizations (see Appendix A)
- Often descriptive, may include financial and non-financial data

# Typical Elements of Social Accounts

- **A. Community Involvement:** General philanthropy, Public and private transportation, Health services, Housing, Aid in personal and business problems, Community planning and improvement, Volunteer activities, Specialized food programs, Education,
- **B. Human Resources:** Employment practices, Training programs, Promotion policies, Employment continuity, Remuneration, Working conditions, Drugs and alcohol, Job enrichment, Communications,
- **C. Physical Resources and Environmental Contributions:** Air, Water, Sound, Solid waste, Use of scarce resources, Aesthetics
- **D. Product or Service Contributions:** Labeling, Warranty, Responsiveness to consumer complaints, Consumer education, Product quality, Product safety, Advertising, Constructive research

# Examples of Social Accounting

- Tradecraft,  
<http://www.globalnet.co.uk/~traidcraft/sa9495/index.html>
- British Telecom,  
<http://www.groupbt.com/society/index.htm>
- General Motors,  
[http://www.gm.com/company/gmability/environment/env\\_annual\\_report/index.html](http://www.gm.com/company/gmability/environment/env_annual_report/index.html)
- Intel <http://www.intel.com/intel/finance/social.htm>
- United Airlines  
<http://www.ual.com/site/primary/0,10017,1359,00.html>



# Social Accounting Perspective

- “Social” is construed narrowly, leaves out production, sale and distribution of goods and services, taken for granted
- Managers responsible for preparing the social accounts
- Information inherently dispersed
- Uses perspective of the firm, not the members of society
- Fuzzy image

# Income/Value of the Firm

- Extensive income as the sum of:
- To the shareholders
- To customers
- To Vendors
- To employees
- To creditors
- To government
- To community, etc.
- Inducement from the firm – O.C. of contributions

# Income/Value to Investors


- Residual income and corresponding shareholder value created
- Focus of current financial reports
- Apply similar perspective to other participants in the firm

# Income/Value to Customers

- Customer's "investment" in the form in the form of search, learning, negotiation, payments, settlement of disputes
- Expected PV of benefits from goods received should exceed the PV of investments
- Includes immediate transaction as well as the consequences of the transaction for resource flows associated with any future transactions (reduction in time, cost, search etc. for later transactions)
- In a perfect product market, consumer's surplus from the firm is zero (may be +ve from industry, and the economy)

# Value to Government

- Various levels of government provide mostly non-priced services plus some priced goods
- Resources from taxation
- Value of the firm to the government from providing priced services is the same as for vendors
- Value of the firm to the government from providing non-priced services is taxes plus fees minus O.C. of resources spent on providing services
- Major challenge to put this into practice



# Value of the Firm to Community

- Local, national and global
- Most exchanges in form of externalities
- Value of the firm to the community is the sum of net externalities plus the net payments

# Measurement of Income/Value

- J.M. Clark (1936): Three fundamental challenges to determining the value of private enterprise
  - Imperfect and incomplete markets
  - Fundamental values not as exact as market values
  - Fundamental concepts should be independent of specific institutions of exchange (generality)

# Markets and Value of the Firm

- In a perfect market Law of one price holds, everyone gets the same price
- Value to the supplier of factor is zero
- Existence of value =>market imperfection
- Perfection can be the tendency of markets under certain conditions, not the goal of any agent
- Agents seek and create imperfections (specialization, differentiation, monopolies)
- Value creation as a treadmill, not ski lift
- Market frictions/trans. Costs create room for value

# Externalities in Value of the Firm

- Difficult problems of measurement because there is no help from markets
- Most organizations produce and consume public goods
- Extensive concept of income includes the value of these benefits consumed and bestowed on (and losses inflicted on) the community

# Difficulties of Measuring Externalities

- Example: Vans to transport employees from train station
- Cost of service to the firm, and benefits of lowered costs of parking, absenteeism, morale, etc.
- Employee savings: cash, time, fatigue, etc. best estimated by employees
- Benefits to fellow commuters, local government, citizens
- Lump together as community, apply social cost-benefit analysis to determine income to community
- Sensitive to identity of preparer
- Valuation: social rate of discount lower than private

# Implications: Mergers and Acquisitions

- Extensive debates surrounding the consequences of corporate mergers and acquisitions
- Empirical studies: Target firm shareholders gain,
- Acquiring firm shareholders' wealth effect not clear
- Occasional attention to bondholders, and tax consequences
- Effects on labor, customers, vendors, community rarely examined
- What kind of policy decisions possible on the basis of shareholder value alone?

# Justification for Shareholder Value Criterion

- Assume neoclassical model of the firm (all surplus always goes to the owner, income/value to all other agents is zero both before and after the event): no need to look at the effects on any other class of agents
- Capital markets are said to be efficient, at least more perfect than other factor markets
- Contradiction between the two assumptions

# Who Gets the Goodies?

- Agents who transact in relatively perfect markets should get prices close to O.C.
- U.S. capital markets said to be more perfect than others
- Suppliers of capital should be expected to get close to their O.C.
- Surplus/value of the firm should accrue mostly to agents who transact through less perfect markets
- Yet, we assume that the surplus goes to the shareholders

# Contract Renegotiation

- Shareholders have the only open-ended contract in the firm
- All other contracts are periodically renegotiated; these agents try to capture a share of the surplus whenever possible
- Short term contract agents have an option value that shareholders lack
- Shareholders (as a group) and unvested pensioners cannot quit when faced with having to absorb negative surplus
- Many mergers and acquisitions are followed by contract renegotiations

# Need Analysis of Extensive Income and Values

- For policy, need analysis of income/values to all agents, not just shareholders
- Given their long term inflexible contract, imperfections in corporate governance, they may not be able to capture all, or even most, of the ex post benefits of value-enhancing mergers and acquisitions
- Possible leakage to other agents through market imperfections, holes in corporate governance when value is enhanced
- Shareholders left holding the bag on depletion
- Would not know without analysis of extensive income/value of the firm

# Shareholder Value As Guide for Accounting Policy

- Event, ERC, Value-Relevance,  $R^2$  studies cited as justifications for accounting policy
- What is the theoretical justification for using shareholder value for this purpose (other than neoclassical perspective)
- Law of the Instrument (Kaplan): Use whatever data is available, extensive income/value measures unavailable

# Concluding Remarks

- Neoclassical perspective is not useful for analyzing many accounting issues
- Income and value concepts driven by this perspective have their limitations, and contradictions
- For important classes of accounting matters, we may need extensive concepts of income and value
- Lessons from national income accounting

# Thank you

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- Shyam.Sunder@yale.edu