## Forum

# Understanding "Gold Farming": Developing-Country Production for Virtual Gameworlds

Gold farming is the production of virtual goods and services for players of online games. It consists of real-world sales of in-game currency and associated items, including "high-level" game characters. These are created by "playborers"—workers employed to play in-game—whose output is sold for real money through various Web sites in so-called "real-money trading."

There is growing academic interest in online games, including aspects such as real-money trading and gold farming (see, for example, *Terra Nova*, where much of this work is reported and discussed). However, there appear to be few, if any, academic publications looking at gold farming from a developing-country angle, and development agencies seem to have completely ignored it.

That is problematic for three reasons. First, as described below, gold farming is already a significant social and economic activity in developing countries. Second, it represents the first example of a likely future development trend in outsourcing of online employment—what we might otherwise call "cybersourcing." Third, it is one of a few emerging examples in developing countries of "liminal ICT work"—jobs associated with digital technologies that exist on the edge of, or just below the threshold of, that which is deemed socially acceptable and/or formally legal.

In basic terms, gold farming is a sizable developing-country phenomenon. The best guesses for 2008–2009 are that 400,000 gold farmers earning an average of US\$145 per month produced a global market that could easily be worth more than US\$1 billion (Heeks, 2008). There are probably 5–10 million global consumers of gold farming services. The main uncertainty of estimation relates to the gold-farming market in East Asia, which appears much larger than that in the U.S./EU. That uncertainty arises in part because gold farming operates at four levels: local, national, regional, and global. We should encompass all four, but the focus to date has been almost entirely on the global trade.

The "pre-history" of gold farming dates from the 1980s, and we can structure it in terms of capitalist development, starting with "subsistence" production and moving through barter, commoditization, and monetization, until we reach the type of petty commodity production found at the turn of the 21st century. Gold farming proper started in earnest in 2001–2002, but really took off in 2003–2004. We can likewise structure this as a move from petty to capitalist commodity production involving wage labor, automation, and globalization/offshoring, particularly to Asia.

An estimated 80–85% of gold farming takes place in China, mainly in the urban areas of coastal provinces due to the presence of local gamers, ICT infrastructure, and overseas connections. It has also taken place in

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### UNDERSTANDING "GOLD FARMING"

Mexico, Romania, Russia, and Indonesia for global trade, and in India, Malaysia, and the Philippines for local/national trade. It probably helps to reduce unemployment and poverty, in addition to improving national balances of trade and income equity. It may also help reduce crime and provide a model for telecenter and cybercafé financial sustainability.

Gold farming seems to represent an efficient use of capital in job creation terms (estimated at less than US\$800 per job), with wages representing at most 50% of revenue. The main jobs created are for in-game "playborers," who are predominantly male, 18–25 years old, and pushed into the sector by the lack of alternative employment. Most are paid on a piecework or quota basis, but with food and accommodation thrown in. Most work 12-hour shifts, 7 days per week, and can be considered semi-skilled or skilled labor.

How we view this depends on the benchmark. Pay and conditions are poor by Western standards, but as good as, or better than, the alternatives that gold farmers face—in wage, in work content, and in other ways. We may not know how gold farmers' careers progress, but we can say that most enjoy their work and that the oft-applied "virtual sweatshop" label is, at best, partially applicable, and at worst, inappropriate.

The entrepreneurs (almost all men) who start up gold farms are pulled into the subsector by some mix of existing game- and/or gold-farming knowledge, plus the lure of profits. They have created tens of thousands of enterprises that are, in many ways, typical of developing countries: They are principally micro-enterprises that employ less than 10 staff, and they are informally financed. However, they are likely more entrepreneurial than the norm: more likely to grow, less likely to require government intervention, and more likely to survive. They might even build their internal technological capabilities and develop into higher-level game industry or IT sector enterprises.

In all but the smallest firms, gold farmers work alongside managers, researchers, technical support, and customer relations staff. The presence of such staff and Web sales portals create fixed and/or indivisible costs that provide some basis for scale economies. The apparent lack of domination by mediumand large-scale firms means, though, that there must also be scale diseconomies, such as the costs to this shadow industry of "being noticed" by government and game companies. These two stakeholders sit outside the main value chain, which consists of gold farmers, gold-farming firms, brokers/ exchanges, and the player-buyers.

The subsector has taken off because a demand with more money than time met a supply with more time than money. Until roughly 2006, a lot of this took place via brokers, and there was both the potential and reality of super-profits. From mid 2005 to mid 2008, however, in-game currencies were devalued an average of 75% against the U.S. dollar. The continuing survival of the subsector probably relies on a disappearance of those super-profits, increased productivity, and disintermediation, so many firms now sell direct to consumers. Due to these factors. plus new entrants and the anti-gold-farming actions of game companies, power within the gold-farming value chain has, in recent years, become more dispersed, and it has shifted somewhat away from brokers and toward game companies.

Continuing survival of the subsector also relies on overcoming some severe information failures: absence, uncertainty, asymmetry, and communication problems. These have produced many examples of both opportunism and adverse selection, with trading bringing uncertainty, risk, and negative consequences. As expected, these seem likely to have suppressed real-money trading well below its "natural" level and to have induced sellers into making (potentially-hollow) assertions about their trustworthiness. Because of its virtuality, though, real-money trading has seen only a little of the localization and intermediation one might otherwise expect in the presence of such information failures.

Thirdly, continuing survival of gold farming relies on dealing with the many threats it faces. Some of these are business-generic, such as ease of entry, intensifying competition, or rising labor costs. Others are business-specific, but just low-level nuisances, such as character killing by other players, or account- and IP-banning by game companies, or fraud. Others still, such as game redesigns and marketing channel blocks, require constant innovation to stay one step ahead. And a final category is much more serious, such as game company substitution (where the companies themselves start to sell items or high-level characters), or legal action by the companies or by governments. Game companies probably take such action through a mix of economic, moral, and personal in-game experience raPerception outranks reality in the discourse on gold farming, and, at least in the West, those perceptions have been largely negative, serving to homogenize, alienize, criminalize, and moralize about gold farmers. That this has happened, despite counter-evidence, supports the idea that racial stereotypes and views about immigrant labor are remapped into cyberspace (Yee, 2006). It also supports the structuralist argument that institutional forces in the real world are reproduced in new, virtual fields like gold farming. There is some contraflow, suggesting the subsector's virtuality has produced new outcomes (e.g., in relation to intermediaries). Though this falls short of an argument that technology has transformed social structures and behaviors, it means the mix of technology, structure, and agency is unpredictable, and it merits continued research.  $\blacksquare$ 

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