## Changing Over Time



Tackling supply chain labour issues through business practice

The Impactt Overtime Project

Two things have been obvious to responsible investors for a long time. First is that buying low cost goods at the expense of workers' health, safety and welfare is morally bankrupt. Second is that doing so is unsustainable in business terms for companies, all the way through the supply chain. But companies have seemed trapped between these truths and the immediate realities of fierce economic competition.

Meanwhile the current supply chain model is increasingly showing cracks. Changing demographics in China are threatening the hitherto steady supply of cheap, flexible labour. For more than a decade, purchasing companies have adopted and acted on codes of conduct, yet reports of labour abuses and poor working conditions continue to surface. At the end of 2004, a new report was published that focused on the problem of overtime alone; the serious effects on health and safety that it highlighted made devastating reading. For those involved in working to redress the situation, it was becoming clear that, whilst progress on some issues has been made via the audit focused approach, supplementary ways of working are needed to tackle more deeply rooted issues such as excessive hours.

It is high time then for a new approach to be pioneered. This report tells the story of what happened when eleven UK purchasing companies and a forward thinking supply chain consultancy, set out to do just that. Their three-year project focused on the specific issue of overtime and it tested a model based on what essentially comes down to 'business common sense'. As one of the project participants commented 'For a long time I held an unproven theory that, by optimising productivity and efficiency, factories could reduce their working hours and improve their pay. Being able to put this theory to the test... was a great opportunity'. ${ }^{2}$

The results were inspiring, not only because the approach proved to be effective in addressing the key issues of overtime and pay, but also because it brought fundamental business benefits to supplier factories, which in turn benefited purchasing
companies. The purpose of this publication is to share these results with the many supply chain players for whom labour issues are a concern and a business risk. These are the players in a position to benefit from the findings in this report by reviewing their own practices and looking for opportunities to pursue similar initiatives. New opportunities and new challenges also emerge for their shareholders, both in assessing the impact of supply chain labour issues and for encouraging companies to tackle them. The responsibility for finding solutions is a shared one and the sponsors of this report hope that the practical, effective, business orientated approach described here offers an opportunity for real progress to be made.

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This publication gives convincing evidence that a new approach to tackling labour standards issues, focused on change over time rather than strict compliance, can have a positive impact even on the most intractable problems. It tells the story of a collaborative project in China which aimed to reduce excessive overtime without reducing wages, through building the factories' own capacity to improve productivity, human resources management and internal communication. The lessons learnt from this work can be applied to a wide range of sectors and countries.

Companies are under increasing pressure to tackle labour standards issues in their supply chains. This is especially pertinent in China, owing to the increasing dependency on Far East production and also to the prevalence of many severe labour abuses in the country. Working excessive hours is one of the most common labour standards problems in China, and one which has failed to respond to purchasers' compliance activity. Workers often work 360 hours per month and some work up to 400 hours, almost twice the legal limit. This is the equivalent of 12-13 hours per day or 80-90 hours per week with no days off in a whole month. In the UK employees work an average of 44 hours per week. ${ }^{3}$ This situation in China leads to reduced efficiency, high rates of accidents, worker dissatisfaction and therefore high worker turnover. The excessive overtime hours are driven by inefficient internal production systems, poor human resources management, inadequate internal communications, the buying practices of purchasing companies and poor quality and late delivery of inputs.

Some regions in China, especially in the Pearl River Delta, are now experiencing a labour shortage and high levels of worker turnover. At the same time there is increasing pressure from the Chinese government and from workers themselves to improve conditions. Factory managers are therefore starting to realise the business necessity of understanding and meeting workers' needs.

There are clear limitations to the current approach
to tackling labour standards issues, which is often heavily dependent on compliance-focused audits. This approach has made little progress in tackling the entrenched issue of long working hours in China. Assessments therefore need to become more focused on supporting continuous improvement and should be supplemented with capacity building activities. So a new approach is needed, one which allows for gradual change over time, presents a clear business case to factory managers and which supports change.

Impactt worked with 11 purchasing companies and with local partners over a period of three years to test the theory that by improving a factory's productivity, human resources management and internal communications, hours can be gradually reduced, while maintaining wage levels. The project found that improvement is possible and most factories saw increased productivity, reduced reworking, steady or increasing pay and reduced worker turnover. Although most factories achieved reductions in working hours, none were able to be consistently compliant with Chinese labour law, which sets stricter limits than European, US and International Labour Organisation standards.

Some factories responded to the inputs better than others. The success of the project in different factories depended on various factors including managers' commitment and openness to new ways of working, commitment and involvement of purchasing companies, and trust and transparency between all parties. Progress was also most significant where the factories made changes in all project focus areas rather than just productivity and where they communicated the changes effectively to all levels of the workforce.

There are a number of challenges emerging for different groups as a result of the project. For factory managers the challenges are to further improve two-way communication with workers and to ensure that a fair proportion of the benefits gained through the project are passed on to workers. The challenges for purchasing companies include working with suppliers over an extended
period of time and providing support for changes rather than demanding immediate compliance. This means understanding the pressures on factories, rewarding honesty and ensuring that their buying practices do not undermine their ethical trading activities. Purchasers need to set realistic leadtimes and stick to timescales agreed. Another key challenge is to encourage the Chinese government to set more achievable overtime targets. For investors the challenges are to review how they assess the impact of companies' supply chain labour issues and to encourage companies to develop more responsible buying practices and to take a new approach that understands the root causes of these issues and provides support to address them through gradual improvements.

The lessons and benefits of this project need to be spread in a resource- and cost-effective manner. Therefore the project team are planning to develop practical resource materials and training courses for purchasing companies and for factory managers.

Companies are under increasing pressure to tackle labour standards in their global supply chains. The issue is fundamental as it touches on working conditions including hours, payment, health and safety and freedom of association.

Pressure on companies is coming from a diverse and increasingly public range of sources. As a result, companies that want to attract and keep public trust, customers, investors and employees are seeing the need to tackle the ethical issues within their supply chain, not only to develop and communicate their policies on these issues but also to move forward to make progress in improving conditions. The focus of this pressure is no longer just on the garment, footwear and food industries but is widening to other retail sectors, the latest target being the electronics sector, and beyond retail into service and manufacturing industries. This publication tells the story of a group of companies that decided to take a progressive approach to tackling these issues through collaboration with each other and with local partners.

Just as concerns about working conditions apply to an increasing range of industry sectors, they are not limited to a few countries. The issues addressed in this report are common to most developing economies and are also found in industrially developed countries. This report focuses on China, a country of particular strategic importance in terms of global trade, but also where the labour market has developed rapidly over the last ten years. The lessons from China need to be learned now and applied widely in order for international trade to progress in a sustainable manner. It is important first to understand why the current operating model in China has become unsustainable.

## The Context in China

## Working conditions

Conditions in Chinese factories are well-reported; wages below the legal minimum, high levels of work-related accidents and illnesses and the retention of deposits, workers' identity cards or residential permits in order to keep the workers at
the factory. Independent trade unions, separate from the All China Federation of Trade Unions (ACFTU), are illegal.

In Impactt's experience of visiting over 100 factories in China, over 90\% (and perhaps nearly all privately owned factories) have excessive overtime. There is an institutionalised culture of working time violations in China's labour intensive export sectors and this is commonly seen as one of the most difficult issues to tackle in China.

The law specifies a normal working day of 8 hours and a 5-day working week of 40 hours. Maximum legal overtime hours are 3 hours per day, 36 hours per month and 432 hours per year. Therefore the maximum total legal hours per month, including overtime, is 204 hours.

A survey conducted by the provincial Department of Labour and Social Security of Guangdong revealed that $85 \%$ of the migrant workers in the province have to work for 10 to 14 hours every day and nearly half of them have no rest day. This survey additionally found that most migrants are not paid a premium for overtime. ${ }^{4}$ Impactt has found that it is common for workers in export factories to work up to a total of 360 hours per month, the equivalent of 11.5 hours per day, every day of the month. Some workers have even been found to work over 400 hours in a particular month, almost twice the legal limit. This is the equivalent of 80-90 hours per week. The magnitude of this issue is highlighted when this is compared with the fact that full-time employees in the EU work on average 40 hours a week and in the UK, 44 hours per week. ${ }^{5}$ The levels of overtime common in Chinese factories are even well in excess of the extremes in the UK, where only $16 \%$ work over 60 hours a week. ${ }^{6}$

Media reports of incidents of workers' deaths caused by overwork have begun to circulate. They reflect a heightened awareness of overtime as a key concern and have a serious impact on public perception of Chinese factories.

## Labour shortage

China's rapid growth has been fuelled by its large migrant workforce and investment in new factories which has, until recently, been premised on the belief that there is a limitless supply of workers ready to work in export factories. However, there is now a rising labour shortage in China that has surprised many commentators. The Pearl River Delta has about 19 m migrant labourers, but is short of about 2 m more. ${ }^{7}$ Managers of factories report that worker turnover rates are soaring and that it is particularly difficult to keep skilled workers.

There are varying views on the cause of the labour shortage but it is clear that new opportunities closer to home are deterring many from venturing south and workers who do migrate south are no longer prepared to accept whatever wages and conditions they are offered.

The impact of this shift can be seen in two developments. Factories that want a stable work force and do not want to see their trained workers leaving for other factories are finding that they need to improve pay and benefits. Hong Kongowned companies are reporting that costs are rising. This is due to rising input costs but also rising labour costs, caused by recent increases in the statutory minimum wage, as well as factories' own efforts to increase wages. Meanwhile, the prices paid by purchasers are static or falling. Therefore managers are not able to pass on increases in production costs to their customers.

In addition, there is anecdotal evidence suggesting that some factories facing catastrophic levels of worker turnover are now employing more vulnerable workers, for example 15 year olds (under the legal minimum working age of 16) and unregistered people. These unregistered people are second or third children born illegally under the one child policy. They have no ID card and no official status. These vulnerable workers are less likely to protest at poor labour standards.


## Changing worker perspectives

The stereotype of a passive and submissive workforce is also becoming less accurate. Workers are increasingly aware of their rights and are prepared to protest and even to take employers to court. On 6 October 2004, 3,000 workers from a factory in Shenzhen, Guangdong's most prosperous city, took to the streets to demand higher wages. ${ }^{8}$ Labour Ministry figures showed that workers compensation cases reached 184,000 in 2002, nearly doubling over the previous five years. Workers won $47 \%$ of their cases in 2002, while companies won $15 \%$ and the rest were settled in arbitration. ${ }^{9}$

There are varying views on the reasons for this increase in worker unrest. One key factor is that wages have not kept pace with the cost of living. A second factor is that workers are more aware of their rights, but lack any representative structures through which to discuss issues with management. This means that frustrations build and spill over into protest.

## Pressure from the Chinese Government

Labour rights issues are rising up the agenda of the Chinese government, partly to protect their reputation internationally and partly to promote national stability. The government has passed new laws, increasing protection for workers in areas of health and safety, trade unions and child labour and they are increasingly putting pressure on companies to abide by the labour laws, especially on wages and
hours. The State is also beginning to provide support for workers including opening nearly 2,500 official legal aid centres between the mid-1990s and 2003. ${ }^{10}$ The number of inspections is increasing and the penalties for breaking labour laws are becoming more severe. For example, the Shenzhen authorities fined a Hong Kong-invested joint-venture electronics company a record RMB 1.96 million (equivalent to almost $£ 130,500$ or US $\$ 237,000$ ) in December 2004 for paying illegally low wages and forcing workers to do overtime. This occurred as a result of an investigation into a huge street protest of 3,000 of their employees. ${ }^{11}$

## Existing Approaches and their Limitations

Audit has emerged as the dominant tool for tackling labour standards in supply chains. Although audits have led to some improvements in areas such as health and safety there is a growing consensus that audits alone are not sufficient to drive positive change. If very short timeframes are set for improvements it often proves unrealistic for tackling the fundamental problems of pay and hours whilst continuing to deliver product on time at the agreed price. Often follow-up is poor and results in few sustained improvements being made on the ground.

A World Bank consultation of 400 individuals including 200 workers and 200 representatives of organisations and companies concluded the following:
"Increasingly, buyers are recognizing that the traditional approach to compliance is not generating the desired results in terms of improved social and environmental standards... It was noted that the overall reliance on monitoring created a system in which the suppliers' main objective was to pass the audit, rather than address the substantive issues that are the focus of the audit... There was a strong desire expressed by buyers for the development of sustainable solutions to supply chain issues, and collaborative efforts to achieve this goal."
Strengthening implementation of corporate social responsibility in global supply chains,
World Bank Group, October 2003

A study of UK retailers commissioned by The Local Authority Pensions Fund Forum concluded that the retailers assessed were in danger of relying too heavily on auditing to achieve improvement in overseas supplier labour standards. It advises retailers to change focus to building capacity amongst suppliers.

Overseas Employment Standards, Second Benchmark Study,
Local Authority Pensions Fund Forum, UK, December 2003
"Inspections in themselves do not make improvements: improvements come from workplaces gaining the knowledge and skill to understand requirements and implement them. That is why a growing number of companies have realised the need to compliment their programme of inspections with training and other capacitybuilding activities."

A Retailer's Perspective, Putting Ethics to Work, Ethical Trading Initiative Annual Report 2003/2004

The black-and-white approach taken by many companies may even have a negative effect on working conditions. Audits can drive dishonesty, a lack of openness and even fraud, when suppliers feel forced to provide the 'right' answer or face serious business implications. As the Financial Times recently reported, Chinese factory managers are becoming increasingly professional at faking records and coaching workers to give acceptable responses during worker interviews. ${ }^{12}$ This trend towards concealment is a serious barrier to improving labour standards as it wastes time and money, without making any change at all in the workplace.

Taking a strict compliance approach to assessments can also drive knee jerk reactions which may in fact further harm workers. Impactt's surveys have found that whilst workers do not want to work the excessive hours which are currently being demanded of them, they are willing to work more than the low limits set by Chinese national law in order to increase their pay packet. If a factory suddenly reduces hours to legal limits without any
effort to increase productivity, workers' wages will dramatically decrease and they may object or even leave.

The learning from this is that assessments need to be more focused on supporting continuous improvement rather than demanding immediate compliance. Assessments perform a useful function but need to be supplemented with capacity building efforts for factory managers.

## A New Approach

It was the limitations of this 'normal compliance model' that prompted Impactt to consider a new approach to the problem. This needed to allow continuous improvement over time, to present a clear business case to factory managers for improvements and to support the change that was being requested.

The project set out to understand and to tackle some of the factors which drive high levels of overtime by providing technical assistance on productivity, human resources management and improving internal communication / labour relations. The project encouraged change over time by aiming to reduce the need for long overtime hours, whilst maintaining wage levels.

## 2 Understanding the problem

The following diagram shows how the situation of excessive overtime hours is perpetuated in many factories.

Figure 1: The Vicious Circle


## External Drivers

## Buying behaviour

Tight lead times, late sample approval and lastminute alterations to product specification put increased pressure on factories to deliver orders. Customers often demand that late shipments are air freighted and that the extra cost be borne by the supplier. One factory reported that air freight costs approximately $10-15 \%$ of the value of the order and more than wipes out any profit.

## Factories' suppliers

Problems with the quality and late delivery of raw material inputs further delay the start of production and squeeze the window of time for production. In one factory it was estimated that only $45 \%$ of production orders had the full information and materials ready by the scheduled production commencement date.


High levels of work in progress in one of the factories

## Internal Drivers

## Quality and productivity

There is generally poor production planning including a lack of knowledge of critical path, little awareness of standard times needed to produce items and poor communication between merchandisers, factory management and production. Quality management is driven by customer requirements rather than the need to promote efficiency within the factory; therefore productivity measures are underdeveloped.

At the start of the project many of the factories were reworking an average of $5 \%$ or more of their products. On some lines with some styles, reworking could reach levels of more than $50 \%$. Piece rate workers are not paid for reworking. This means that a significant proportion of working time is not only unproductive, but also unpaid.

## Human resource management

Systems for assessing the skills of new workers seldom exist, therefore factories recruit unskilled workers but often fail to provide induction or training. There are also few systems for monitoring worker performance and little opportunity for workers to improve their skills and be promoted to higher paid, more senior, jobs. This robs the companies of tools for improving productivity and creates few incentives for skilled workers to stay.

The labour shortage is also forcing factories to take on more low skilled workers.

## Communications

Workplace conditions often suffer from limited trust between workers and supervisors. Supervisors and middle managers may lack management and HR skills and have a tendency to speak rudely and shout at workers. Middle managers often do not see the importance of retaining workers.

Two-way communication between workers and management is usually poor, so that changes in pay or hours are frequently not understood, and on occasion are resented, by workers. Insufficient communication about changes to product specification can lead to increased levels of rework and thus overtime. This creates a situation where there are few effective channels for workers to raise their concerns with managers and managers often do not respond to workers' concerns or suggestions.

## Low-skill workers

Most workers arrive at factories with low level skills. Because they are often paid by the piece, without an overtime premium, factories have no direct financial incentive to reduce long hours. Workers build their skills "on the job" so that factories do not pay directly for training, but face the hidden costs of low productivity, low quality and factory overhead for long hours.

## Outcomes

## Long hours and low pay

Long overtime hours are embedded in business culture in China and are considered normal. Excessive overtime is closely linked with low pay as workers are forced to work long hours to earn enough to live on. Low-skill workers and poor productivity and quality management in the factory leads to excessive overtime because fewer pieces can be made in each hour and workers spend time doing rework.

Factory management generally operates under the assumption that workers want to work all the overtime they can get. Interviews with workers during the project and visits to other factories showed that although workers want to work more overtime than the law allows, they usually do not want to work as much as they do currently. Generally, workers say that they would be happy with 2-3 hours per evening of overtime and 4 days off per month.

Long hours lead to tiredness, illness and accidents. These contribute to low productivity and high levels of reworking, which in turn lead to longer hours as workers rework rejected pieces. Piece rate workers are not paid for reworking and so high levels of rework significantly affects their pay. This also contributes to high worker turnover.

## High worker turnover

The needs of migrant workers are changing. They no longer all want to return to their rural hometowns after a couple of years but are eager for stability and many are now making long-term plans for their future in more developed areas. This means that the structural reasons for high levels of worker turnover are vanishing. However, the mobility rate of migrants between factories still tends to be very high in comparison to the stable population.

Until recently, there has been a surplus of migrant workers, which has meant that managers have seen their workers as easily replaceable. But some managers in the project commented that they are finding it difficult to recruit new workers and to keep skilled workers. High worker turnover costs factories through lower productivity of new workers and investment in recruitment and training. This recruitment of new unskilled workers allows the vicious circle to continue.

## Applicability

Impactt has experience in a wide variety of Chinabased factories, including electronics, toys, shoes, ceramics, plastics, household goods, appliances, garments, dental hygiene, accessories, wooden,
glass, upholstery and metal products. The experience indicates that Chinese factories in a wide range of industries and locations, in general, face similar problems and are caught in the same selfperpetuating circle.

Furthermore, while excessive hours are a more serious issue in particular Asian countries, in many other regions, the same problems exist: poor productivity and quality management, human resources management and communication as well as similar external pressures from purchasers that can drive the perpetuation of excessive hours.

The graphs on the right show the inverse correlation between efficiency and the number of overtime hours (i.e. when hours are long, productivity is low) and how this was demonstrated in the monthly data submitted by the majority of factories through the duration of the project. Each graph presents data from a different factory. Although the graphs are clearly influenced by seasonality, external factors and changing business conditions, they provide an interesting visual demonstration of the relationship and highlight the volatility of the production cycles experienced by many factories.

Productivity (on the left hand axis) is measured in total pieces produced by the factory that month, divided by the total worker hours. The right hand axis shows average hours worked per worker per month. This was based on aggregated figures provided by the factories to Impactt each month.

Figure 2: Productivity and Hours





## 3 The Impactt Overtime Project

## Introduction

The seemingly intractable problem of long overtime hours in China had been the subject of discreet discussions among a number of retailers for a long time. In response, Impactt suggested convening a group to work together towards a shared solution, pooling resources and experience to produce a more significant result than could be achieved alone. In 2001, Debenhams, Hennes \& Mauritz, Kingfisher, New Look, Pentland/Ellesse and Sainsburys came together to experiment with a new approach, and formed the first of two groups of purchasing companies to work with Chinese organisations and supplier factories to find sustainable ways of reducing excessive overtime working. Following positive results from this group, a second wave of companies comprising The Body Shop International, Ikea, Lambert Howarth, Marks \& Spencer and Next was convened by Impactt in 2002.

The project set out to reduce overtime by improving efficiency, human resource management and communication between management, supervisors and workers. It was funded by the purchasers, with some additional funding from the Ford Foundation and CAFOD. Some of the factories also paid for further productivity consultancy.

Each purchasing company chose one of their supplier factories in China to work with on the project. The factories were located in Guangdong Province, Hangzhou and Xiamen and produced garments, underwear, beauty products, furniture and accessory products, all of which involved lowtech, labour intensive processes. The factories varied widely in size from 200 to 2,500 workers and the percentage take and therefore the leverage of the purchasing company also varied widely from $2 \%$ to $90 \%$.

The first stage of the process was for Impactt to visit each factory in order to benchmark the starting point from which to measure change. An in-depth evaluation of labour practices was based on a detailed inspection of the site, interviews with management, review of records and worker interviews carried out by independent researchers from the Institute of Sociology and Population Research, Guangdong Academy of Social Sciences and the Institute of Contemporary Observations. These visits not only aimed to understand the issues faced by the factories but also to grasp some of the root causes and factors that were perpetuating the situation. At the end of the project, the team conducted a final benchmarking exercise using the same methodology to measure changes made since the initial visit.


Local organisations participated in the project to provide inputs to support improvements in each factory. The first of these was training in productivity from the Hong Kong Productivity Council (HKPC). This involved a visit to assess the factories' current production methods and recommendations for improvement followed by a group training session with other factory managers. The second input was a consultancy visit and training session in human resources management, conducted by Linda Xian and by Yalian Li from the Shenzhen Society of Human Resource Management. They explored opportunities to introduce positive HR management techniques into factories and to use incentives to support improvements in productivity. The final input involved participatory communication workshops, led by the Guangdong Participatory Development Appraisal (PDA) Network. These workshops brought in managers, workers and supervisors - who would normally very rarely discuss issues face to face - to work to understand each group's perspective on its own factory's issues and to negotiate shared solutions.

## Factory 1 Case Study

## Key achievements from November 2002-2004

- 30\% increase in productivity
- Downward trend in average working hours
- Upward trend in wages (\% of workers earning the minimum wage for normal time increased from $40-50 \%$ to $95 \%$ )
- Greater sense of teamwork and higher levels of motivation (cited by workers, managers and supervisors)

Located on the outskirts of Dongguan, Factory 1 employed 2,500 workers producing accessory goods. One particular unit of 250 workers made accessories solely for the purchasing company in the project and this was where activities were focussed initially, with the intention of rolling out improvements to the other production units over time.

At the start of the project, overtime hours were a significant problem for the factory with $38 \%$ of the workers in the unit working more than 132 hours of overtime in one month. Saturday working was not considered overtime by the factory, despite being over and above the standard hours allowed by law. The maximum overtime level in this production unit was 160 hours per month (including Saturday working), giving a total (standard and overtime hours) of 328 hours in the month.

Although workers were paid by the day rather than by the piece, many workers were still not earning minimum wage for standard time. The factory gave overtime payments of $110 \%$ for all overtime worked, although the law requires $150 \%$ for weekday overtime, 200\% for weekend overtime and $300 \%$ for national holiday working.

Employees interviewed by Impactt were unhappy about the long hours, compulsory overtime work, low pay, fines and poor quality of food. Although it seemed that health and safety management was
generally good, with accidents recorded by the medical centre and minor injuries dealt with in the first aid room in each production unit, the team had concerns over the poor practices for chemical handling and storage in a number of areas and workers were worried about the lack of chemical safety training.

The factory ran a system of warnings and some fines and did not provide any productivity bonuses. A union existed in the factory but it only focused on providing entertainment and did not provide genuine worker representation.

However, the project team found many aspects to praise in the factory. For example, the production area, canteen and dormitories were clean and tidy and efficient time records were kept with the help of an electronic swipe card system. Record keeping was good; contracts were signed and agreed with local government and the workers received proper wage slips.

In general, managers in this factory were progressive and keen to improve. They had started to experiment with productivity improvements, including better data gathering, modifications to layout and new equipment in some sections. However, management of their own suppliers left room for significant improvement with only $40 \%$ of production orders having all the necessary inputs at the required start date.

## New Initiatives

## Productivity and quality

Productivity training and consultancy by the HKPC introduced new ideas and techniques to the factory's recently formed Industrial Engineering Department. These looked at production planning and critical path analysis, production layout, visual management techniques and assessing raw material suppliers. They also explored proactive techniques for enhancing quality control. Factory managers responded to the input with enthusiasm and, understanding the strong business case for more

# "Employees interviewed by Impactt were unhappy about the long hours, compulsory overtime work, low pay and fines. 

efficient production, attempted to implement many of the ideas and recommendations that came out of the consultancy and training sessions.

For example, managers introduced a centralised buying function in an attempt to have better control over timing of raw materials and components, and to reduce downtime. They appraised suppliers before placing orders and rated their material suppliers according to quality. Their new supplier appraisal system was so successful that it resulted in reducing the percentage of materials having to be returned to suppliers to only $2-3 \%$.

The Industrial Engineering department then analysed the production process to highlight where bottlenecks were occurring and created a database of standard product cycle times which could be used to support production planning.
One significant change was the managers' decision to introduce straight line production in the pre-production department, which allowed semifinished parts to be passed on to production as they were ready, rather than waiting until all the parts in a batch were complete. This had a dramatic effect, almost halving pre-production lead times.

Each morning, production managers and supervisors met to discuss progress, identify problems and suggest improvements. When taking on a new style the factory started to complete trial runs of a limited number of items to allow them to identify and resolve problems at an early stage, before the start of the full production run. After the trial, they would rush through the production and inspection of the first bundle to make sure it met customer requirements and to iron out remaining problems early on. The size of each bundle of products passed between workstations was reduced and the factory introduced other strategies to reduce bottlenecks in production including assigning high skilled workers to more difficult tasks, rebalancing the line and capital investment in new machines. One newly purchased machine cut the time required for a drying process from between 45 minutes and 2 days (depending on weather conditions) to only 7 minutes.

HKPC recommended that the factory use display boards and visual management techniques to increase awareness and motivation. Managers responded by displaying production targets and


Output data recorded and displayed on the factory floor
output data in the line so that workers and supervisors could track their progress against targets on an hourly/half-daily basis. These boards also provided workers with information on piece rates.

The Quality Control teams were strengthened and reorganised; they split from the production department in order to have greater objectivity and started having quality meetings each morning. They managed to increase final inspection to cover 100\% of the product run and monitored $10 \%$ of individual workers' output. Accountability for quality mistakes was increased through records hung on each workstation. Workers experiencing most problems received extra training or were moved to an easier job and reworking was passed back to the workers who made the mistake in order to increase awareness.

## Human Resources Management

Yalian Li, from the Shenzen Society of Human Resources Management, visited the factory to assess the factory's human resources procedures and skills and to recommend improvements. During this visit, the specialists found that personnel at middle
management and supervisor level needed to improve their people management skills since there was a tendency to speak rudely and to shout if workers were missing targets. It emerged that workers felt unfairly treated, in particular with regard to pay and appraisal systems. Middle managers and supervisors did not feel responsible for retaining workers and did not appreciate the importance of training them; they saw recruitment as an HR task and simply requested new recruits as people left. The factory's HR team was aware of the need to improve training of middle and line managers and indicated that they were open to making changes.

Factory managers also attended a human resources management training seminar covering how to assess skill levels and training needs, developing and implementing training programmes, ongoing skills development, performance evaluation and structured career development. The session also explained the benefits of incentives and reward structures and provided suggestions for implementation.

The factory took on a number of the HR recommendations and improved their systems for worker recruitment, evaluation and training. Firstly, they developed processes for worker evaluation, both at the recruitment stage (with a graded skills exam for new workers) and also throughout employment, with regular evaluation exams and annual appraisals introduced for all workers. Monthly salaries were adjusted to reflect workers' performance and extra training was offered if they failed the exams. Managers developed a grading system that ranked all workers according to skill level and provided training to assist workers to progress to more skilled jobs. They also set up a training centre to provide workers with off-line training and to set exams following these training courses. When managers analysed the turnover rate of workers who received skills training, they found that of the 118 workers who were given sewing training, only $5 \%$ had subsequently left the factory.

Some factory managers mentioned that it was difficult to find workers to fill certain skilled positions. They then tried to address this issue by providing the most able workers with training and promotion opportunities in order to fill such positions.

The factory put in significant effort to provide general management training. For example, supervisors and line leaders were able to attend workshops on managing production problems and balancing product lines. Middle managers and supervisors benefited from training in basic management skills. People management was an essential component of this training and participants discussed a particular issue that had been identified by the consultants on their visit: the consequences of supervisors giving preferential treatment to workers from their own province. Following the training, managers said that they saw some change in the way supervisors managed their workers but recognised that they needed further help to make more significant improvements.


In-line trainers in one of the factories in the project
The factory moved away from 'negative' human resource techniques by reducing fines during the course of the project and instead introduced a system of worker incentives and productivity bonuses. A production bonus could be earned by exceeding production targets in ordinary time, which provided a strong incentive for workers to work hard during ordinary time rather than pushing
work into overtime hours - thereby reducing the need for long overtime hours. These bonus incentives also put upward pressure on the line managers to keep work available since the workers were keen to keep working. On average, around $32 \%$ of workers' total pay was derived from this bonus and managers considered raising this percentage. Workers' base salaries were also related to their skill level.

In order to understand why workers were leaving, managers introduced exit interviews, allowing them to tackle and reduce the reasons for discontent amongst workers. One such change showed up in the final benchmarking visit when workers said that they were happy that it was easier for them to request leave during quiet periods than before.

## Communications

For three consecutive days the factory was involved in participatory communication workshops involving managers, workers and supervisors and led by the Guangdong Participatory Development Appraisal (PDA) Network. Separate workshops were held for workers, supervisors and then managers, to understand how they perceived the problems and benefits of the factory such as overtime, worker turnover, productivity and illness. The PDA Network then facilitated workshops that brought all the groups together in order to listen to workers' and supervisors' suggestions for tackling problems and to negotiate between the groups to agree solutions. This provided workers with a daunting but exciting chance to present their views to their managers.

Participants at all levels contributed actively to what turned out to be extremely lively workshops. It was clear that these workshops improved mutual understanding and respect between workers and

management. Pay, hours, benefits and health and safety were all discussed and this contributed to the changes already mentioned above. Some of the issues raised by workers were fairly easy for the factory to remedy and yet made a significant difference to workers' quality of life; one example was an improvement in quality of food served in the canteen.

At the end of the project workers, managers and supervisors all talked about a greater sense of teamwork and higher levels of motivation. After daily meetings were set up for supervisors to meet with the factory manager, supervisors started to work together more closely, in contrast to the lack of trust and high levels of overlap and inefficiency at the start of the project.
Supervisors also said that they had benefited from the communication skills training organised by the factory, particularly through learning about new ways of communicating positively with the workers. Line chiefs said that their daily briefings with their supervisors gave them a better understanding of what was expected of them and that they now find it easier to speak to their seniors. They also commented that they felt less tired and more motivated because all the team earned a productivity bonus.

## Teleconferences

The purchasing company initiated a series of teleconferences from May 2003 to December 2004 involving the project manager from the factory, the direct suppliers' UK and HK staff and the purchasing company's UK and HK staff. These conversations provided an opportunity to agree specific achievable and high priority actions out of the recommendations and also to follow up on actions to encourage progress. This was an essential part of
the success in this factory and other factories in the wider project that did not have this level of engagement did not see as much change.

## Outcomes

## Improved quality and productivity

The factory achieved improvements in quality, shown by reduced reworking, as well as productivity measured by the increase in the number of pieces produced per worker per hour. The factory was therefore able to reduce the number of hours worked because of the increased output per worker hour. Wages also increased since the factory introduced a bonus scheme linked to skill and output.

## Reduced working hours

The number of hours worked by each worker decreased but, as with all the factories in the project, did not achieve consistent compliance with the strict limits set by Chinese law. Peak season overtime hours per day reduced from 5 hours to 3-4 hours. Peak season overtime per month reduced by $13 \%$, from an average of 148 to 128 hours. These reductions in working hours were achieved through small reductions in overtime each evening, generally 30 minutes to 1.5 hours and also through the introduction of more days off per month, which increased from 0-4 to 3-4.

At the end of the project the workers said that they were very motivated by the new bonus scheme and appreciated not working on Sundays and not having to work past 8pm, since in the past they had worked until 11 pm . They noticed that they had to improve the quality of their work but felt that they were being supported to do so.

## Increased pay

The total monthly pay that each worker took home rose markedly even though workers were working fewer hours. This was extremely important as it demonstrated to managers and workers alike that total wages could remain static or even increase
when hours were cut, so long as there were increases in productivity and the financial benefit was actually passed on to workers. Monthly pay for ordinary time (without overtime payments) also increased; average basic salary went up by $58 \%$ due to the introduction of production bonuses. However, increasing wages via production bonuses meant that skilled workers benefited more than unskilled workers and in some cases unskilled workers may not have seen the benefit of increased wages.

At the final benchmarking, only a small minority of workers were not making minimum wage - $5 \%$ as compared to $50-60 \%$ at the start of the project.

## Factory 2 Case Study

This small factory, originally situated on the second and fourth floors of an industrial building in Shenzhen, employed 200-250 workers making garments for a number of foreign retailers. The factory's managers described the relationship with its largest customer - which purchased $90 \%$ of the factory's output - as good, particularly in terms of communication and prompt sample approval. It was this purchasing company that participated in the Impactt Overtime Project. Factory managers and workers began the project with an openness to new ideas, to discussing issues and to providing access to all relevant documentation. However, the factory's performance at the initial benchmarking stage left a lot of room for improvement.

Worker annual turnover in the factory was extremely high (140\%). Interviews conducted at the start of the project revealed that some workers wanted to leave the factory because of the long overtime hours and because management was too strict. Workers said that there were few ways to talk to managers and many did not want to; there was no union and no committees on which workers were represented. Relationships between workers and their supervisors were also strained. Supervisors were suspected of not accurately recording the number of pieces made by each worker and of extending working hours further than the management had planned. The factory operated fines for 14 different offences
and workers did not receive any skills training for their jobs.

Overtime levels were also high. Even during low season workers averaged 100 hours overtime per month. The rest of the year, workers worked between 170 and 225 hours overtime per month (often until midnight or 1am), ie a total of 338-393 hours (standard plus overtime hours). Not

surprisingly, all workers interviewed said that they worked too much overtime, however they wanted to work some overtime - most wanted to finish work by 10 pm or 11 pm .

While very few workers were aware of the amount of the legal minimum wage, even managers appeared not to know about the most recent increase. Impactt found that few piece rate workers received minimum wage for a 40 hour week and none were informed of the piece rate itself. Workers were aware however that they were not properly compensated for overtime and believed their wages to be unfair.

Poor performance was noted in a number of other areas. For example, the project partners were seriously concerned about the management of health and safety issues, finding inadequate escape routes and locked or blocked fire exits.

Systems for tracking and improving productivity and quality were poor. No formal line quality control system existed and no records were kept of reworking rates during the production process. Piece rate workers were set daily targets and supervisors made daily estimates of how many pieces each worker made. However these records were not kept for more than a few days. The factory estimated that 70\% of fabric supplies were delivered at least one week late. At the start of the project, high reworking levels were recorded - up to an average of $7 \%$ during production and $10 \%$ following final inspection.

In August 2003, the factory relocated to a site four times the size of its original premises on a business park outside Shenzhen city. Although the number of its workers doubled, the working environment was dramatically improved at the same time by larger workstations with more natural light and ventilation. Few productivity and quality improvements were made until after the move.

## New Initiatives

## Productivity and quality

HKPC provided an initial consultancy visit and training session as part of the project that covered all stages of the production process, from assessment of suppliers, to cycle planning and quality control. Performance measurement was also a critical element of the training.

Alongside this project input, the factory arranged an additional 50 days consultancy over one year from HKPC.

Taking key lessons from HKPC's recommendations, the factory began by employing a manager to set up an Industrial Engineering department and a data bank. This Industrial Engineering department then started to introduce production planning processes that included process analysis, line balancing and target setting. Regular production meetings involving managers and supervisors started to take place in order to strengthen communication, review production and quality. Managers also set up monthly meetings with the finished packing team to discuss problems.

The factory management took steps to address the way they worked with supply chain partners. For example, they reduced the lead times for samples by working more closely with merchandisers to develop a better understanding of customers' needs and by increasing the number of people working in the sample room. Management of the factory's own suppliers improved through more thorough inspections of incoming raw materials.

Managers decided to pilot straight line production on one style and, finding that efficiency improved by $86 \%$, rolled out this process across all product lines in the new factory. Unfortunately, however, workers did not feel that the new systems were sufficiently explained to them.

Trial runs for new styles were set up to identify potential issues and bottlenecks, which were then


Straight line production in one of the factories.
addressed by deploying more highly skilled workers and rebalancing lines. Managers took steps to reduce bundle sizes and the amount of work-inprogress in order to facilitate visual assessment of the production process. They also introduced a system for packing during the production process, rather than packing only once it was complete. Managers and supervisors began to record daily performance data for lines and individual workers which they then posted on the production floor so that workers and supervisors could track their progress against targets.

The Quality Control department separated from production and inspectors were then able to move around the factory to check problems. Managers ensured that customer requirements formed part of the training for QC inspectors and were communicated to workers. 'Workmanship boards' and samples were hung above each line to alert workers to 'watch points' in the production. Supervisors checked the output and quality of each worker three times a day and hung records of these on each worker's machine. They also made on-thespot training available for workers who needed it.

## Human Resources Management

The factory received the same human resources consultancy and training as other factories in the project, covering recruitment, training and development, performance assessment and reward structures. However, the factory was not very active


Bundle tally system for an individual worker
in making HR improvements and at the end of the project workers said that the atmosphere in the factory was still very strict. The factory did reduce the number of fines and abolished deposits but, although the Hong Kong management was keen remove fines completely, the Chinese factory management was resistant because they feared that they would lose control of the workers.

During the communications workshops, workers expressed a desire for training and books on safety, factory rules and technical information. At the final benchmarking managers said that all new workers were trained in the factory's rules. Again however, workers did not feel that the changes had been sufficiently explained to them.

Managers encouraged supervisors to improve their relationships with workers. This topic was discussed at regular meetings, in which productivity and other matters were also brought up. Supervisors were given skills training, relating to both productivity and positive treatment of workers.

## Communication

The factory participated in communications workshops led by the Guangdong Participatory Development Appraisal Network, as did other factories in this project. However, only small changes were made and by the end of the project management did not seem to have made significant progress in terms of communication within the factory.

A comments box was placed in a private area of the factory so that workers could submit comments anonymously. These were then posted on the notice board, and if appropriate, managers could respond to them. However, comments tended to relate to feelings about being in the factory, rather than improvements that could be made. Managers continued to hesitate about establishing a system of worker representation, despite feedback from workers in project interviews that they felt uncomfortable raising concerns with supervisors and would like to have a more effective communication channel with managers.

## Outcomes

## Management approach

The project team noticed a marked change in the management's mindset during the project. Previously they had placed the blame and responsibility for long overtime hours entirely on their customers and the short lead times that they were given. Towards the end of the project they recognised that they could resolve some of the pressures to work long overtime hours themselves. Managers expressed pride in the way they had responded to the challenge, citing real improvements in the efficiency of the factory and their use of better management information. They felt that the productivity inputs from HKPC in particular were practical and allowed them to 'unlock' their capacity. However, efforts made to improve productivity and quality were not matched by those made to address human resources management or communications and were overshadowed by the lack of openness of some of the factory managers during the final visit. Some of them seemed nervous when the team returned to speak to workers and workers appeared to have been coached. Worryingly, the benchmarking team did not feel confident that they were shown accurate pay and hour records on their final visit.

## Improved quality and productivity

Impressive improvements were made in both productivity and quality to the extent that managers believed that the net cost of producing each item was reduced despite significant increases in wages.

## Reduced turnover

In the six months before the final visit, the average adjusted annual turnover rate was $9.6 \%$, a huge improvement on the original $140 \%$ level. The change suggested that despite the lack of human resources initiatives, the combination of a generally improved working environment together with some increase in wages and reduction in working hours had a positive impact on how workers felt about the factory.

## Reduced working hours?

At the end of the project, many workers said that while they were very happy with the new facilities, hours had not been reduced sufficiently. (Overtime per day reduced from 3.5-6.5 hours to 2.5-4.5 hours per day. However, $60 \%$ of workers interviewed said they would ideally want to work 2-3 hours overtime per day.) It appeared that managers had not translated the significant productivity gains into a commensurate reduction in overtime hours.

However, peak season overtime did reduce during the project from 170-225 hours to 132 overtime hours per month, constituting a $22-41 \%$ reduction. Feedback from workers confirmed a reduction in total hours, but a review of the payroll at the end of the project suggested that there may have been a significant number of hours that had not been recorded. 'Voluntary overtime hours' in the evenings appeared to have been paid but not recorded. By the end of the project, workers were getting at least two days off per month when they had previously often had none.

Managers did become more flexible about allowing workers to have time off work. Previously, workers had been unable to take leave; if a family member was ill, for example, the worker would have to
resign so that he or she could return home to look after the relative. According to the managers, the factory's policy was changed to allow workers to request any length of leave.

In this factory, the lack of accurate records at the time of the final benchmarking made it hard to verify the apparent reductions in overtime. However, the data was confirmed as far as possible through observation and through interviews with workers and managers.

## Increased pay?

Monthly data submitted to Impactt by the factory showed an increase in average wages for ordinary time and at the final benchmarking most workers appeared to be making at least minimum wage. While the inaccurate hours records made verification of pay difficult, even allowing for hours well in excess of those recorded, most workers would have been able to make the minimum wage in standard time. However, the factory was still not paying legal premiums for evening overtime or rest day work.

Payslips were made more detailed. At the end of the project workers understood how their wages were calculated, but still did not know the individual piece rates.

## Other improvements

The new work environment was very pleasant with air conditioning, ceiling fans, spacious work areas and plenty of natural light. Health provision, fire safety, hygiene and housekeeping improved noticeably during the project. Accident records were introduced and the factory opened a clinic in 2004. By the end of the project the factory had 12 people trained in first aid and 13 trained in fire safety.

## 4 SummaryIAnalysis of results

The graphs below show the percentage change in key trends based on an average of the data from the different factories. The figure at the start of the project was taken as the baseline and a percentage change from that figure was calculated for each subsequent month.

Productivity was measured as total pieces per worker, per hour. Quality was measured in terms of levels of reworking - the reduction in reworking therefore indicated an improvement in quality.

Although the data was affected by seasonality, external factors and changing business conditions,
 the graphs still show clear trends.

Figure 3: Key trends monitored through the Impactt Overtime Project

Working Hours: Average \% Change


Productivity: Average \% Change


## Workers' Pay Average \% Change



Reworking: Average \% Change


## Overall Project Results

## Overtime

All factories began the project with peak season overtime hours well in excess of Chinese labour law. The data from benchmarking visits showed a measurable reduction in working hours in all factories between the start and the end of the project. A key factor, particularly important in terms of workers' interests, was the increase in the number of days off each month. However, although these reductions did not bring the factories into consistent compliance with Chinese law, many factories did show significant improvement towards international standards.

## Productivity

Two factories, which undertook the broadest range of productivity activities, achieved particularly impressive increases in productivity, with one factory achieving an increase of approximately 190\% during the project. Those which did not have a positive trend had taken little initiative on productivity or had been affected by moving sites or by very poor business conditions in the wake of SARS. All the factories took action to improve their quality management and therefore all the factories showed an overall downward trend in reworking. All factories achieved a reduction in reworking of at least $25 \%$.

## Workers' pay

At the start of the project, a majority of factories employed some workers who earned less than the minimum wage for standard time. However, during the project, total monthly pay and also monthly pay for ordinary time rose markedly in four factories even though workers were working fewer hours. This demonstrates that total wages can remain static or even increase when hours are cut, as long as there are increases in productivity and the financial benefit of this is passed on to workers. Total pay remained much the same where hours were cut without significant increases in productivity. Significant increases in earnings were achieved at some factories due to the introduction of production bonuses.

In one factory the management did reduce overtime, but without successfully increasing productivity and as a result the total wage of workers reduced and a number of workers left. This highlights the importance of making the changes in hours in conjunction with the other inputs.

## Worker incentives

In all factories, in response to the project, pressure from purchasing companies and other labour standards initiatives, management started to move away from punitive human resource management (fines, deposits etc.) and towards positive measures (quality bonuses, skill premiums, loyalty payments, paid sick pay etc.). In all factories the use of fines was reduced or stopped during the project period and those factories which took deposits abolished the system. Production bonuses were introduced in the majority of factories.

## Communication

Industrial relations was the area where the least sustainable progress was made. At the start of the project, worker/management communication in all factories was undeveloped. There was some progress on improved communication in some factories, and one factory established a new workers' committee during the course of the project. However, in most factories, at the end of the project, workers were still not provided with effective mechanisms for communication and workers said that they still felt uncomfortable raising concerns with supervisors.

## Employee turnover

Almost all factories reduced worker turnover during the project, indicating that workers were more satisfied with their working conditions and benefits. Worker turnover rose in one factory due to a policy of asking workers to leave if they did not achieve their productivity targets after further assistance and training. However, this factory's retention of skilled workers improved dramatically.

The overall results across all the factories in the project show a very high correlation between the
level of implementation and the success of outcomes in terms of improved productivity and quality, reduced worker turnover, increased pay, health and safety and industrial relations. All factories showed positive change overall over the duration of the project but the best results were seen in the factories that took comprehensive steps in many areas, rather than just productivity.

## Breaking the Vicious Circle



- Improving internal quality and productivity management systems can lead to a reduction in hours without reducing wages, since workers are making more pieces in standard hours. Piece-rate workers are not paid for re-working. This means that a significant proportion of working time is not only unproductive, but also unpaid. Reducing re-working is therefore an important element of boosting productivity as well as reducing working hours without reducing wages.
- The productivity inputs also encourage improvements in production planning, closer communication with purchasers and assessment of input suppliers. These also mitigate the external factors which can force factories to work excessive hours.
- As hours are reduced, workers are less tired and are therefore more productive, less likely to have accidents or get ill and therefore this has a positive reinforcing effect on productivity, quality and worker satisfaction.
- Improved human resources management helps to break the vicious circle by enabling the factories to attract and keep skilled workers so that reworking and the need for overtime can be reduced. This involves providing appropriate training and opportunities for promotion, alongside positive incentives to persuade workers to stay.
- Better communication ensures that workers understand and support the changes made to management systems, production and incentives. If workers do not understand the changes there can often be a sense of unfair treatment and dissatisfaction, contributing to continued high worker turnover. Workers need to be behind the improvements and understand how they will benefit so that they will work with the changes rather than against them. Workers also need the opportunity to voice their concerns, giving management a chance to understand and meet their needs.


## What makes it work?

The model, however, does not reflect a simple relationship between improved productivity and compliance in other areas. The project identified a number of factors that contributed to successful outcomes. The following are the key dependencies enabling the model to work effectively:

## Managers' openness to new ideas and ways of working

Managers in the successful factories demonstrated a high degree of open-mindedness and were willing to experiment and take risks. They quickly grasped the potential opportunities for their factories.

## Creative responses

Managers in the successful factories responded creatively to the project inputs. Rather than just applying the recommendations directly, they internalised the lessons and generated their own actions, appropriate to their factory and workforce.

## Commitment of managers

If managers can see the business benefits, they are willing to experiment with changing production layout, human resources management, pay structures, etc.

## Commitment of purchasers

The input of the purchasing company proved crucial to the success of the project. This was partly related to commercial influence of the customer in terms of the percentage of production purchased, but was also due to the level of support and commitment of the purchasing company. Regular visits by the purchasing companies together with teleconferences to agree actions and discuss progress with the factory management proved to be extremely successful in motivating and encouraging sustained improvements.

## Long-term relationship with supplier

It was easier to influence managers with whom a long-term relationship had been established. Progress was hindered in some factories where the purchasing company in the project was reducing their orders and reducing their leverage.

## Ongoing business conditions

Guangdong Province was badly hit by the SARS epidemic between February and July 2003. This had a negative effect on orders in some factories, which had to take on more small orders from local companies and sometimes to make products of which the factories had little or no experience. This dramatically affected efficiency in some factories and diverted management attention from the project objectives.

## High level of trust and openness

Managers need to feel confident that they can be open about the real working conditions at the factory.

## Continuous improvement approach by purchasers

If factories are working with purchasers who have a strict compliance mentality, management time and effort is diverted to covering up the real working practices in the factory and to presenting a false 'compliant' picture in order to protect their business. Progress was hindered in one factory which felt pressured to comply immediately, due to poor communication of the project aims and of the step-by-step approach that was intended.

## Size of the factory

The larger factories in this group tended to perform better than the small ones as they had more inhouse resources to invest in making improvements. Internal industrial engineering and human resources departments were important players in developing and sustaining changes appropriate to the factory.

## Type of manufacturing process

Productivity improvements proved to be relevant to different manufacturing processes and product types. However, in one factory the major manufacturing process only involved one step. This meant that potential productivity improvements were limited since there was little flexibility to improve the efficiency of production and factory layout.

## Making change in all project focus areas

The best performing factories at the end of the project were those that had broadened the focus of their activities to include committing management resources to the project, making changes in human resource management, incentivising workers, planning production, production itself and quality. The least successful had pursued a narrow focus on production process and quality management.

## Communication across the factory

The more successful factories communicated changes more effectively to all levels of the workforce, gaining their support and co-operation.

## Competence of local partners to deliver effective inputs

Since this type of project was quite innovative at the time in China and few groups had experience of working on such projects, Impactt worked closely with project partners to build their capacity during the project and to help them to improve the effectiveness of the inputs.

## Other Key Lessons from the Project

## Openness and transparency

Factory managers said that the project had given them an unprecedented opportunity to discuss overtime and related problems openly with their customers. They commented that this approach was in stark contrast to ever-increasing pressure
from most customers to demonstrate either full compliance or an unrealistic level of ongoing progress.

However, there was a drop in openness in some factories, including discrepancies opening up between records and what managers were saying and finding that workers appeared to have been coached to give the 'right' answers rather than telling the truth. In these factories, managers said that they had started coaching workers to make sure that the factory "passed" customer audits. The managers said they had not coached workers for the Overtime Project visits, but that workers now knew what answers the factory wanted them to give to auditors.

Half of the factories in the project presented false or inaccurate records to the project team at some point. A further two factories admitted that they prepared false records for some customers, but claimed they had not done so for the project team. The remaining factory was not audited by any other customers and managers said that they were not yet under pressure to produce fake records. Therefore, almost all of the factories routinely presented false data to auditors. This trend reflects the intense pressure that factories feel to demonstrate compliance to customers outside the project. Some managers commented that their customers were more interested in tick-box compliance than in continuous improvement and would terminate business if they saw evidence that a factory worked even one hour over the limits set by Chinese law.

In factories where false records were presented, it seemed that the managers themselves did not have access to the real data and were therefore unable to understand the genuine improvements they had made.

## External versus internal drivers

This project emphasized resolving the internal factors driving overtime, rather than the external factors, such as the buying practices of customers. While this project illustrates that focusing on
internal factors can result in some impressive improvements, this work also shows that there is a strong need to focus on external factors in order to have an even greater impact.

The preliminary research of a well-known brand reinforces this view. It recently identified 10 overtime drivers in its factories. Four of these drivers were purchasing company-related such as delayed sample confirmation, four were factory related such as incorrect time-of-production and two were industry related such as seasonality. This research illustrates that there are an equal amount of internal and external drivers and there is therefore a real need for purchasing companies to take more responsibility for their influence on overtime practices and to make sure they set realistic leadtimes and stick to the timescales agreed with factories. This is discussed in more detail in the next section under Challenges for Purchasing Companies.

## 5 Who Benefits and What are the Challenges?

This section highlights the implications of the project findings for workers, factory managers, buying companies and investors.

## Workers



## The benefits

In most factories, the workers benefited from reduced hours and increased number of days off per month. Average pay also increased in the majority of factories. In some factories, the relationship between managers and workers improved through less tension and increased respect, leading to better team working. The concentrated focus of the project brought other unexpected improvements that made a real impact on workers' quality of life, such as better food and recreational facilities. Interestingly, in worker interviews the quality of food proved to be of higher importance to workers than many other issues.

## The challenges

In some factories, the project and the changes implemented were not clearly communicated to workers. This led to confusion and even a sense of unfair treatment, especially when pay systems were adjusted without explanation. However, where the changes were clearly communicated, workers recognised where they benefited from them.

To sustain the benefits delivered to workers, workers need to be given a voice to raise their concerns and negotiate with management. Despite
the communications and human resources inputs, industrial relations in all factories remained underdeveloped at the end of the project.

## Factory Managers

## The benefits

Reduced working hours moves the factories towards compliance to the law and therefore reduces their vulnerability to charges from local law enforcing bodies and from workers. This change also brings improved relationships with international suppliers increasingly pressing for improvements in these areas. Factory managers also gain savings on factory overheads such as utilities and special overtime allowances, thereby lowering production costs. Reduced worker turnover also brings financial and management benefits to the factory.

The management of Factory 2 believed that improving productivity and reducing working hours whilst maintaining pay levels actually increased their profitability. This was accounting for the considerable investment made by the factory in implementing productivity recommendations.

At the start of the project, factories collected some quality data but purely to meet customer requirements. In most cases, this data was not used to analyse problems or support improvements. Through the project factory managers learned what data to collect for quality and output/productivity and how to display, analyse and use this data in order to drive productivity improvements that benefited their business.

Importantly, managers from five factories who attended a joint meeting in October 2003 all agreed that the project had allowed them to be honest with their customers about the problems they faced and provided an opportunity to work together to solve them through incremental improvement. They also felt the project had prompted them to think differently and to be able to identify and tackle problems in a more proactive way.

## The challenges

The success of the model would be put at risk if factory management did not pass some of the benefits of productivity gains to workers, but instead absorbed all of the financial benefit of the productivity gains by:

- Reducing piece rates, thereby increasing workers' need and motivation to continue working long hours
- Accepting more orders, making workers work the same hours as before, but more productively or
- Passing all the benefits on to customers through increased flexibility.

The project team acknowledged that pressure from the purchasing companies would be an important factor in keeping reductions in excessive overtime high on the factory agenda. Improvements in human resources and communications were also used to encourage factory managers to pass on some of the benefits to workers through reduced hours and maintained or increased pay.

Some factories reduced working hours dramatically without combining it with productivity improvements to enable them to maintain wage levels and this led to increased worker dissatisfaction and worker turnover. This reflected the fact that for many factory managers the move from strict compliance to continuous improvement involves a significant mind-shift. However, this fundamental change of perspective and the ability to see the business benefits for themselves are necessary in order to meet the challenge of sustaining improvements once the focused attention of the purchasers has reduced.

## Purchasing Companies

## The benefits

The purchasers involved in the project identified the following benefits and potential benefits for their own companies:

- Enhanced relationships with key suppliers, defined by increased trust, openness and goodwill
- Better service from suppliers in terms of controlled delivery and improved product quality
- Mitigation of the risk of negative publicity about labour standards.


## The challenges

The primary challenge for purchasers is the need to work with suppliers over an extended period of time on issues of hours and pay rather than demand immediate compliance. This means understanding the pressures on factories, having realistic expectations of achievable changes and rewarding factories for honesty, even when this reveals 'noncompliances'. Purchasing companies need to work with the factories to incentivise and support incremental change in order to rebuild the trust that has been eroded by overly strict compliance practices.
"We would like our clients to help our factory to achieve what they require rather than to merely police our factory"

Chinese factory manager attending a workshop run by Impactt

A significant issue identified by the purchasers involved in the project is companies' ability to replicate the model across supply chains in a resource- and cost-efficient manner. There is also a need to build understanding and skills around these issues both in purchasing companies and in the supply chain. These have therefore been the focus of subsequent development work by the project team and potential solutions are outlined in Section 6. A specific element of this challenge is the need to build local capacity and expertise in order for factories to have access to support that can be tailored to their needs.

For the model to work effectively, it is essential that buying companies do not use the productivity
improvements to further accelerate lead times or squeeze prices. The project highlighted the importance of purchasing companies ensuring that their commercial agenda supported rather than undermined the efforts of their supplier factories. Current practice is generally to place all the responsibility for meeting local laws and codes of conduct on suppliers. However, while excessive overtime is partly driven by the inefficiency of internal systems, it is also driven by buying practice trends towards shorter lead times and lower prices. Poor purchasing practice in terms of late changes to orders and sample approvals can also push factories to work long hours. Purchasers need to acknowledge their own responsibility to agree realistic leadtimes and then keep to the timescales agreed with factories. There is therefore a growing tension between companies' policies on ethical trading and their commercial operating practices. The approach taken in this project provides an opportunity for greater alignment of these forces.

Research by Insight Investment and Acona ${ }^{13}$ has suggested some areas in which purchasers could improve their buying practice in order to reduce the negative impacts on supply chain labour standards. This included improving critical path management to minimise slippage and improve communication among all those involved in the buying process; improving the accuracy of forecasting to reduce lastminute demands on suppliers; developing cost models that apportion hidden costs of poor labour standards and quality in the supply chain and reviewing management and appraisal frameworks for buyers to include other elements such as quality and ethical standards in appraisals rather than just incentivising purely on margin alone. Finally the research recommended creating a buying culture in the company that supports achievement of ethical standards and reduces consequent negative effects on suppliers.

Purchasing companies need to work with factories to achieve realistic interim targets for overtime, as the local law is generally unobtainable for most supply chain factories in China. There are also arguments for encouraging the Chinese Government
to set more realistic goals for overtime. Research carried out by worker interviewers in the Overtime Project, and during Impactt's other factory work in China, shows that most workers would like to work 2-3 hours overtime per night and have four days off per month. This means $92-129$ hours of overtime per month. Managers with good systems believe 102 overtime hours per month to be a realistic target. However, the legal limit is 36 hours.

## Investors

Supply chain labour problems have emerged as a key risk factor for China-based companies and global companies which rely on Chinese suppliers. As this study makes clear, badly managed workplaces with substandard labour conditions are also inefficient, unproductive workplaces. While there is still a presumption by some investors that low labour costs will inevitably offset low productivity, we see numerous indications that the trade-off may not be quite that straightforward for companies which have come to rely on Chinese supply chains. Clearly there are medium to longterm risks as suppliers struggle to address the needs of a rapidly changing workforce and to raise quality standards and capabilities in order to find a place in more interactive supply chain partnerships.

## The benefits

Investors already have ample chance to monitor the statements of global branded goods manufacturers which rely on China-based factories. However, the focus to date has been on benchmarking elements of companies' audit and compliance systems, with little scope for assessing how successful such systems have been in addressing actual underlying problems. Furthermore, the operation of such systems provides insufficient insight into a company's relationship with its suppliers in business terms - of relevance to socially responsible and mainstream investors alike.

The strategies discussed in this report offer an alternative approach to the audit and compliance model and have not only shown to be effective in starting to address underlying issues, but also to be
aligned with key elements of a successful supply chain relationship: productivity, quality and reliability. This report indicates that a more thoughtful approach to particular labour issues benefits purchasing companies and their investors by changing the focus from audit costs to productivity investment and from higher prices to fairer pay.

Investors assessing companies' supply chain labour issues have focused on downside risk, such as damage to brand value, consumer boycotts, disruption to continuity of supply or costs of 'crisis management'. Such risks are still relevant but may be balanced by significant upside opportunity stemming from strategic partnerships with dynamic, supportive supplier companies. The issue of trust alone, highlighted in this report in terms of false records and 'coached' employees, illustrates the potential for translating risks into opportunities in supply chain relationships.

## The challenges

New challenges emerge. The experience of the Impactt Overtime project indicates that it is time for investors to focus on a broader and more strategic set of concerns about the purchaser-supplier relationship.

Investors need to take account of the finding that the practice of purchasers demanding immediate compliance with codes of conduct from their suppliers can, in some cases, perpetuate problems. Codes of conduct are essential for setting standards. However, priority needs to be given to understanding the root causes of labour issues and for purchasers to provide practical support for suppliers to address these through step-by-step improvements. Investors' risk modelling needs to reflect the fact that the level of a purchaser's investment in developing solutions alongside its suppliers will impact the longer term sustainability of its supply relationships. The emphasis on short-term risk is therefore replaced by medium to long-term upside opportunities.

There is no question that alongside better production management, responsible buying practices are necessary to break the long-standing pattern of labour violations and low productivity. Investors need to encourage purchasing company managers to ensure that their own processes are not creating unnecessary additional pressures which work against fairer and more productive workplaces. In particular, if suppliers are able to become more efficient and productive, the benefits need to reach the workers and not be absorbed solely by purchasing companies through further accelerated lead times or price reductions. Purchasers and their investors share the responsibility for ensuring that supplier workplace conditions are viewed in a more strategic light which keeps the focus on better conditions and improved productivity.

A new set of indicators is needed for investors to evaluate supply chain performance, risk and opportunity. A 'bottom up' analysis of the supply chain can provide further valuable insight for investors of both purchasing and supply companies. There is considerable scope for investors to encourage more realistic disclosure from purchasing and supply chain companies. Based on the work described in this report, it is clear that investors should be asking more questions about the following issues:

- The level and pattern of labour turnover at supplier companies
- How supply chain companies define their employment practices
- Whether and what kind of training is provided
- Compensation structures: piece rate, skill-based, incentive, or retention bonuses
- The number of links in the supply chain

ASrIA has completed a review of initial public offering documents from supply chain companies which were listed on the Hong Kong Stock

Exchange in 2004. ${ }^{14}$ This sample of 18 companies provides interesting insights into the development of the Chinese supply chain and highlights the challenges faced by investors trying to assess supply companies that have moved from private to public status. Indeed, for investors looking to assess the performance of developed market purchasers, it is important to remember that the better established Asian suppliers are increasingly listed companies and their disclosures can provide a cross-check on purchasers' statements and insights into disclosure gaps. In particular, public offering documents provide disclosure on legal compliance, stated relationship with employees, quality control and supply of raw materials - all of which provide information relevant to performance on labour issues, including overtime.

With regard to the capacity for investors to assess performance on labour and overtime, the review concludes that:

1) Investors can gauge a company's exposure to labour trends by monitoring simple metrics such as changes in workers employed and the labour component of cost of goods sold
2) The disclosure of operational characteristics and management practices, such as product quality control, can highlight issues which have implications for labour and specifically overtime practices (e.g. unreliability of raw material supply, short lead times and customer behaviour)
3) Few companies discuss their labour force in strategic terms although low cost labour is often a critical element of their current and future competitive advantage. The lack of commentary on labour turnover trends is a meaningful omission in light of the fact that the Guangdong Government is now reporting a shortfall in workers of roughly 2 million in the Pearl River Delta and of 0.4 million in Shenzhen. ${ }^{15}$
4) Statements about compliance with relevant PRC laws on workplace labour conditions and performance on managing the workforce are vague. Material comments about workplace health and safety issues are rare.
5) Only a handful of companies have so far provided the type of disclosure needed to establish a comprehensive baseline for assessing future management performance on labour management issues.

Following the publication of this Public Report, the project team aims to share practical learning to enable the lessons and benefits of the project to be spread as far as possible. The following resources are planned for development:

## 'Toolkit' - a practical resource handbook for buyers and technologists

- the extent of the problem of overtime and the pressures factories face
- the impact of excessive overtime on workers and on factories' ability to deliver
- factors driving overtime
- understanding the limits of a compliance focused approach
- the impact of purchasing practice
- streamlining purchasing practice to reduce pressure on factories
- providing a more sustainable model for reducing overtime hours in factories, with concrete examples of what Chinese factories have achieved and suggestions of how to work with factories to find solutions and set up action plan.

There will also be a training course covering the above material.

## 'Toolkit' - a practical resource handbook for factory management.

- the business case for reducing overtime
- the dangers of cutting overtime without tackling HR and communication
- improving productivity
- using HR to increase worker productivity and worker loyalty
- tools for strengthening communication
- developing proactive management systems


## Training workshops for factory managers

- Key learning from Chinese factories that have made improvements in productivity and reduced overtime
- The business case for tackling the overtime problem
- Ideas for advancing productivity, HR and communications including practical exercises and games
- Tools for driving continuous improvement and the opportunity to create a tailored action plan


## Financially viable replication of the model

Many factories in China are becoming increasingly proactive in wanting to learn how to reduce overtime to meet their customers' requirements and to enhance their business. There is growing evidence of a willingness to participate in and contribute to the funding of viable projects. A new, cost effective model has been developed from the learning of the Impactt Overtime Project that is designed to meet the needs of factories.

- Training is provided for factory managers on effective mechanisms for collecting and analysing relevant data.
- Productivity, HR management and communication inputs are provided to enable factories to build systems for identifying and resolving problems in a sustainable way.
- Continuous support and training is made available for factory managers, including case studies, tools and learning from other overtime projects.

Raising awareness about the overtime problem at government levels
There is an ongoing role for all players in the supply chain in raising awareness at government levels of the extent and impact of overtime working in China and in encouraging the development of more achievable, interim overtime targets. This would benefit purchasing companies (who could better enforce their codes of conduct), factory managers (who would have a more achievable goal on overtime working), local government (who could better enforce the laws) and workers (as working hours are more likely to be controlled in line with regulations).

The sponsors and authors of this report can be contacted for further information on the Impactt Overtime Project and the initiatives listed above (see page 38 for contact details).

## Project Partners

During the project Impactt worked in partnership with a number of Chinese and international organisations, including the following:

## Communications workshops and worker interviews

- The Guangdong Participatory Development Appraisal (PDA) Network. The Guangdong PDA Network is a recently formed group of Chinese social scientists, mass organisations and workers' organisations which is developing methodologies for conducting Participatory Rapid Appraisal in factories in China. PRA is a technique which involves workers, supervisors and management in identifying problems and developing solutions.
- The Institute of Sociology and Population Research, Guangdong Academy of Social Sciences: responsible for worker interviews during benchmarking visits and participating in consultative exercises with workers and management (communications workshops). The Labour and Social Environment (LSEA) Network has recently been established under the Guangdong Academy of Social Sciences to focus on these issues.
- The Institute of Contemporary Observation, Shenzhen: responsible for worker interviews during initial benchmarking for wave one and participating in consultative exercises with workers and management (communications workshops).
- The Center for Community Development Studies, Yunnan, involved in consultative exercises with workers and management.
- Ford Foundation funding consultative exercises with workers and management.
- Catholic Agency for Overseas Development (CAFOD) funding consultative exercises with workers and management.


## Productivity

- The Hong Kong Productivity Council, responsible for technical productivity consultancy and training.


## Human Resources management

- Shenzhen Society of Human Resource Management and Linda Xian provided consultancy and training on Human Resources management.
- Timeline - in recent Overtime Projects, Impactt has worked with Timeline, a Guangzhou based organisation, on the human resource management inputs.


## Other partners

- Guangdong Labour Bureau office of the Labour Department, provided a briefing on the labour law for factory managers.

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