#### Title:

Impact Assessment of Fee Changes for Settlement visas, Long term visit visas, Tier 1 visas and Tier 2 visas & in-UK applications, Nationality, In UK LTR and ILR Applications and In UK Dependant Applications.

Lead department or agency: UK Border Agency

Other departments or agencies: N/A

## Impact Assessment (IA)

IA No: HO009

Date: 14/07/2010

Stage: Final

Source of intervention: Domestic

Type of measure: Secondary Legislation

Contact for enquiries: Charging Policy Team, Vulcan House (Iron), PO Box 3468,

Sheffield S3 8WA.

## **Summary: Intervention and Options**

### What is the problem under consideration? Why is government intervention necessary?

New Government proposals to limit net migration and the economic circumstances means that it is harder to predict the numbers of migrants that will come to the UK. Continuing to offer these fees at current levels carries an increased risk that the UK Border Agency may not recover its costs, thereby increasing the burden on the UK taxpayer, and reducing the UK Border Agency's ability to secure the border and control migration for the benefit of the UK.

### What are the policy objectives and the intended effects?

The Government's charging policy objectives are:

- 1. That those who benefit directly from our immigration system (migrants, employers & others) should contribute to the costs of the system and balance this with the interests of the taxpayer;
- 2. That we align more of our In UK and overseas fees; and
- 3. That we keep our fees fair, sustainable and competitive.

The specific objective for fees covered in this impact assessment is that applicants should pay more than the administrative cost of their application in recognition of the benefits they receive from that application.

## What policy options have been considered? Please justify preferred option (further details in Evidence Base)

Option 1: Do Nothing, Retain current fee levels for Settlement visas, Long term visit visas, Tier 1 & 2 visas, Nationality and In UK Dependant Applications.

Option 2: Increase the fee for Settlement visas to £750, increase Long term visit visas, Tier 1 visas to £750, Tier 2 visas to £350 & in UK to £500, increase Nationality, LTR and ILR to spread the burden of fee increases across all routes and increase UK Dependant fee by approximately one fifth to one third of main applicant fee.

The preferred option is option 2, as this will generate the revenue to fund the wider immigration system and to cross subsidise lower fees to support wider Government objectives (such as offering tourist visas below administrative cost in recognition of the economic benefits tourism brings to the UK).

When will the policy be reviewed to establish its impact and the extent to which the policy objectives have been achieved?	It will be reviewed 04/2011
Are there arrangements in place that will allow a systematic collection of monitoring information for future policy review?	Yes

<u>Ministerial Sign-off</u> For final proposal stage Impact Assessments:

I have read the Impact Assessment and I am satisfied that (a) it represents a fair and reasonable view of the expected costs, benefits and impact of the policy, and (b) the benefits justify the costs.

Signed by the responsible Minister: Damian Green MP...... Date: 15 July 2010

## **Summary: Analysis and Evidence**

Policy Option 2

**Description:** Increase the fee for Settlement visas to £750, increase Long term visit visas, Tier 1 visas to £750, Tier 2 visas to £350 & in UK to £500, increase Nationality, LTR and ILR to spread the burden of fee increases across all routes and increase UK Dependant fee by approximately one fifth to one third of main applicant fee.

Price Base	PV Base	Time Period	Net Benefit (Present Value (PV)) (£m)			
<b>Year</b> 2010	<b>Year</b> 2010	Years 5	Low: - £27.4m	High: £85.8m	Best Estimate: £9.8m	

COSTS (£m)	<b>Total Tra</b> (Constant Price)	ansition Years	Average Annual (excl. Transition) (Constant Price)	Total Cost (Present Value)
Low	£0m		£0m	£0m
High	£0m	1	£28.5m	£113.1m
Best Estimate	£0m		£19.0m	£75.9m

## Description and scale of key monetised costs by 'main affected groups'

The economy is estimated to lose £74.7m (PV) from a reduction in the number of migrants coming to or remaining in the UK to work or visit. UKBA is estimated to lose £1.2m (PV) from a net decrease in the volume of applicants applying to come to the UK.

Other key non-monetised costs by 'main affected groups'

N/A

BENEFITS (£m)	<b>Total Transition</b> (Constant Price) Years		Average Annual (excl. Transition) (Constant Price)	Total Benefit (Present Value)
Low	£0m		£21.1m	£85.6m
High	£0m	1	£21.2m	£85.8m
Best Estimate	£0m		£21.2m	£85.7m

#### Description and scale of key monetised benefits by 'main affected groups'

Higher immigration and visa fees will increase fee income to the UK for those out of country applicants who still apply to come to the UK.

Fees from applicants inside the UK are transfers from applicants to UKBA and are discussed in the Evidence Base below.

### Other key non-monetised benefits by 'main affected groups'

Public confidence in secure borders and that migration is controlled for the benefit of the UK.

## Key assumptions/sensitivities/risks

Discount rate (%)

3.5

Wage elasticity of labour supply of 0.5 for PBS routes Tiers 1 and 2 and nationality products; and airfare elasticity of -0.46 for long term UK Visitor visas and Other Visas were used to estimate the likely decrease in numbers of applications as a consequence of the proposed fee increases. The range used below is between -1.1 and 0 based on price and wage elasticities (see Annex 2).

The low estimates for costs are associated with the high estimates for benefits, and vice versa: lower elasticities imply smaller reductions in volumes, generating lower costs in terms of lost revenue and output and higher revenue benefits from those who continue to apply.

Impact on admin burden (AB) (£m):		Impact on policy cost savings (£m):	In scope	
New AB: 0	AB savings: 0	Net: 0	Policy cost savings: 0	No

# **Enforcement, Implementation and Wider Impacts**

What is the geographic coverage of the policy/option?	Worldwid	le				
From what date will the policy be implemented?			Mid-Nove	embe	r 2010	)
Which organisation(s) will enforce the policy?			UK Borde	er Ag	ency	
What is the annual change in enforcement cost (£m)?			0			
Does enforcement comply with Hampton principles?			Yes			
Does implementation go beyond minimum EU requirements?  N/A						
What is the CO <sub>2</sub> equivalent change in greenhouse gas (Million tonnes CO <sub>2</sub> equivalent)		<b>Traded:</b> 0		<b>Non-t</b> 0	raded:	
Does the proposal have an impact on competition?			No			
What proportion (%) of Total PV costs/benefits is directly primary legislation, if applicable?	·					efits:
Annual cost (£m) per organisation (excl. Transition) (Constant Price)	Micro 0	< <b>20</b>	Small 0	Medium Large 0		
Are any of these organisations exempt? No No				No		No

# **Specific Impact Tests: Checklist**

Does your policy option/proposal have an impact on?	Impact	Page ref within IA
Statutory equality duties <sup>1</sup>	No	
Statutory Equality Duties Impact Test guidance		
Economic impacts		
Competition Competition Assessment Impact Test guidance	No	
Small firms Small Firms Impact Test guidance	No	
Environmental impacts		
Greenhouse gas assessment Greenhouse Gas Assessment Impact Test guidance	No	
Wider environmental issues Wider Environmental Issues Impact Test guidance	No	
Social impacts		
Health and well-being Health and Well-being Impact Test guidance	No	
Human rights Human Rights Impact Test guidance	No	
Justice system Justice Impact Test guidance	No	
Rural proofing Rural Proofing Impact Test guidance	No	
Sustainable development Sustainable Development Impact Test guidance	No	

<sup>1</sup> 

<sup>&</sup>lt;sup>1</sup> Race, disability and gender Impact assessments are statutory requirements for relevant policies. Equality statutory requirements will be expanded 2011, once the Equality Bill comes into force. Statutory equality duties part of the Equality Bill apply to GB only. The Toolkit provides advice on statutory equality duties for public authorities with a remit in Northern Ireland.

# **Evidence Base (for summary sheets) – Notes**

## References

No.	Legislation or publication
1	http://webarchive.nationalarchives.gov.uk/20100422120657/http://www.ukba.homeoffice.gov.uk/sitecontent/documents/aboutus/consultations/charging09/
2	http://webarchive.nationalarchives.gov.uk/20100422120657/http://www.ukba.homeoffice.gov.uk/sitecontent/documents/managingourborders/pbsdocs/
3	http://www.opsi.gov.uk/stat
4	

## + Add another row

## **Evidence Base**

## Annual profile of monetised costs and benefits\* - (£m) constant prices

	$Y_0$	$Y_1$	Y <sub>2</sub>	Y <sub>3</sub>	$Y_4$
Transition costs	0.0	0.0	0.0	0.0	0.0
Annual recurring cost	7.0	18.8	18.8	18.8	18.8
Total annual costs	7.0	18.8	18.8	18.8	18.8
Transition benefits	0.0	0.0	0.0	0.0	0.0
Annual recurring benefits	7.9	21.2	21.2	21.2	21.2
Total annual benefits	7.9	21.2	21.2	21.2	21.2

<sup>\*</sup> For non-monetised benefits please see summary pages and main evidence base section

## **Evidence Base (for summary sheets)**

## 1. PROBLEM UNDER CONSIDERATION

Securing our border and controlling migration for the benefit of the UK incurs costs of over £2 billion per annum. We believe it is right that those who use the system make an appropriate contribution to meeting these costs, to help balance the interest of with the UK taxpayer, and recover a contribution through the fees.

We set application fees based on a number of factors, working within strict financial limits agreed with HM Treasury and Parliament. We currently set fees flexibly. Some fees are set above the cost of delivery, to reflect the value of the product. Charging above the cost of delivery helps to raise the revenue required to fund the overall immigration system and cross-subsidise fees below cost for certain other immigration routes where a lower fee supports wider government objectives (e.g. a lower short term visit visa fee to support tourism).

New Government proposals to limit net migration and the economic circumstances means that it is harder to predict the numbers of migrants that will come to the UK. Continuing to offer these fees at current levels carries an increased risk that the UK Border Agency may not recover its costs, thereby increasing the burden on the UK taxpayer, and reducing the UK Border Agency's ability to secure the border and control migration for the benefit of the UK.

#### 2. RATIONALE FOR GOVERNMENT INTERVENTION

We want to make sure that the charging system as a whole continues to contribute towards the costs of running the immigration system, however, in the current economic climate it is harder to predict the numbers of migrants that will apply to come to the UK. This increases risk to the UK Border Agency, and maintaining fees at current levels would not allow us to fully support the immigration system, maintain public confidence, and ensure that migration is managed for the benefit of the UK. We also need to manage the risk to UK Border Agency's income so that we balance this with the interests of the general UK taxpayer. We have considered a number of fees options to reduce the risk.

## 3. POLICY OBJECTIVES

The Government's policy objectives on charging for immigration are:

- That those who benefit directly from our immigration system (migrants, employers and educational institutions) should contribute to the costs of the system and balance this with the interests of the taxpayer;
- That we align more of our In UK and overseas fees; and
- That we keep our fees fair, sustainable and competitive.

We have sought to focus our proposed increases in a way which continues to build on the existing UK Border Agency fees policy and which supports broader UK Government policy objectives (for example preserving the cross-subsidy for short-term visit visas in order to keep them priced at levels which remain internationally competitive).

We have used this opportunity to simplify the fee structure and also help to spread the overall burden across all routes.

This Impact Assessment examines the costs and benefits of the different options considered for the fees for:

- 1. Settlement visas
- 2. Long term visit & other visas
- 3. Tier 1 visa
- 4. Tier 2 visa and in UK applications
- 5. In UK Indefinite & Limited Leave Applications
- 6. Nationality
- 7. In UK Dependant Applications

We have not carried out an Impact Assessment for routes covered by the Council of Europe Social Charter and Tier 1 Transition. Volumes under these routes are negligible and we have therefore assumed them to be zero. We have also not carried out an Impact Assessment for routes where the fee increase is below inflation or for any of the in person applications submitted at a Public Enquiry Office as these are optional services, offered for the benefit of the applicant.

#### **Settlement Routes**

The settlement applications are for husband, wife, civil partner or unmarried/same-sex partner and family members of a British citizen or someone who is settled here.

We propose a £106 increase to the fee for settlement visa to £750. We recognise this is a significant increase on the current fee of £644. We have increased the cost of a settlement visa to better align it with fees paid under economic routes into the UK, and to better reflect the benefits associated with this route (i.e. accelerated and sometimes immediate rights to permanent settlement).

Where settlement visa applicants are not immediately granted indefinite leave, we still believe it is right to set the fee at this level. This reflects the benefits of an accelerated route to settlement under this category of visa, whereby the majority of applicants need not apply for further temporary leave to remain in the UK, before settlement. This fee will also better align with fees we charge on economic routes, where applicants pay separately for a visa and any further leave to remain in the UK.

## **Long Term Visit Visas & Other Visas**

These allow applicants to make multiple visits to the UK within a 2, 5 or 10 year period. Other visas includes various categories, for example, off shore workers, overseas domestic worker - private household, EC business association agreement, sole representative etc.

We propose increasing the fee for these applications in line with our strategic policy to help spread the overall burden of fee increases across all routes.

Applicants benefit from the convenience of not having to make multiple applications, each requiring their biometrics to be taken. We believe this route continues to offer excellent value to the customer. If we are to continue to offer the product – which is rare in the international market - then we need to ensure it is priced correctly. We believe that the suggested fees of £245, £450 and £650 are appropriate levels, anything lower risks impacting significantly on the Agency's income in lost 'renewals' of shorter-term visit visas.

## Tier 1 Visas and In UK Applications

The Tier 1 category allows highly skilled people to come to the UK to look for work or self-employment opportunities.

We propose a £60 increase to the fee for Tier 1 visas to £750. We believe this increase better aligns this fee with that of Tier 1 applications made in the UK.

Migrants under this route obtain a good set of entitlements, they are not required to have a confirmed job offer to come to the UK and have full unrestricted access to the employment market. Furthermore, dependants under this route also get unrestricted access to the labour market.

## Tier 2 Visas and In UK Applications

The Tier 2 category allows people coming to the UK with a skilled job offer to fill a gap in the workforce that cannot be filled by a settled worker.

We propose a £80 increase to the fee for Tier 2 visas to £350 and a £25 increase for Tier 2 applications in the UK to £500. We propose increasing the fee for these applications in line with our strategic policy to help spread the overall burden of fee increases across all routes.

Migrants under this route obtain a good set of entitlements, they can work in the UK for an employer who has sponsored them and their dependants have unrestricted access to the labour market.

### In UK Indefinite & Limited Leave Applications

The Indefinite leave to remain applications are for migrants currently in one of the eligible immigration categories (i.e. Tier 1, Tier 2 etc) and have been living in the UK in a relevant category for five years. The limited leave applications cover various categories e.g. residual work permit leave applications and employment outside PBS applications.

We propose increasing the fee for ILR and LTR applications in line with our strategic policy to help spread the overall burden of fee increases across all routes.

Migrants under the indefinite leave category obtain a good set of entitlements; they have unrestricted access to the labour market and can remain in the UK indefinitely without the need to make any further immigration applications.

### **Nationality**

British citizenship is one of the six different forms of British nationality. Some of these were defined in the British Nationality Act 1981, which came into force on 1 January 1983. Other forms of British nationality have existed, but they are not current.

We propose increasing the fee for Nationality applications in line with our strategic policy to help spread the overall burden of fee increases across all routes.

Migrants under this route obtain a good set of entitlements; they have the ability to apply for a British passport that provides them with free movement rights which allows them to work or live in any part of the EU.

### In UK Dependant Fee

The In UK Dependant category covers all dependant applications submitted at the same time as the main applicant. We propose increasing the fee for dependents from approximately 10% of the main applicant fee to approximately one fifth to one third of the main applicants' fee. This Impact Assessment covers dependant applications for Tier 1, Tier 2, and all indefinite and leave to remain applications.

We introduced a nominal 10% dependent fee in the UK on 6 April 2010. The fee better reflected the fact that each individual within any given application bears an additional processing cost to us (as well as sometimes an independent set of entitlements for the individual). Prior to 6 April 2010, UK Border Agency processed applications from dependents free of charge if they were submitted at the same time as the main application.

This new fee helps further reconcile our UK-based application fee structure with those prices we apply for visas, where individuals applying from overseas (including dependants) each pay a separate fee, and we wish to move to the same model in the UK.

This is being done in stages to keep volumes under close review and to manage the transition carefully. This supports the charging principle that those who benefit from the system should make an appropriate contribution.

#### 4. OPTIONS

The different immigration routes and the complexity of inter-related factors involved means that there are a number of ways this could be done within our flexible approach to charging. To keep this impact assessment workable, we have narrowed this scope to considering two options:

**Option 1**: Do Nothing, Retain current fee levels for Settlement visas, Long term visit visas, Tier 1, Tier 2 visas, Nationality and In UK Dependant Applications.

**Option 2**: Increase the fee for Settlement visas to £750, increase Long term visit visas, Tier 1 visas to £750, Tier 2 visas to £350 & in UK to £500, increase Nationality, LTR and ILR to spread the burden of fee

increases across all routes and increase UK Dependant fee by approximately one fifth to one third of main applicant fee.

The preferred option is option 2, as this will generate the revenue to fund the wider immigration system and to cross subsidise lower fees to support wider Government objectives (such as offering tourist visas below administrative cost in recognition of the economic benefits tourism brings to the UK). It will also help reduce the level of risk to the UK Border Agency where the numbers of migrants applying to come to the UK is uncertain, and will also and balance this with the interests of the taxpayer. The preferred option also meets the UK Border Agency's three Charging Policy objectives.

#### 5. COSTS AND BENEFITS

A model was developed to examine the **additional** costs and benefits to society and the economy of Option 2 compared with Option 1 over a four and a half-year period (10/11 to 14/15). Option 1 is denoted as the 'Do Nothing' option with no additional costs and benefits and is the baseline used for comparison.

## 5.1 Impact on Volumes

The key impact of increasing fees will be that productive migrants will be deterred from coming to the UK, or remaining in the UK, to study and work. Initial modelling based on a number of uncertain assumptions has been used to estimate the potential impacts of additional fees on volumes of migrants willing to supply their labour to the UK or demanding to come to the UK for study purposes. Forecast volumes are based on internal UKBA application volumes which are uncertain and subject to change. These may not match those used in the Limits Consultation Impact Assessment, which are based on actual historic approvals volumes.

For the fee changes in option 2 which fall upon the dependant; we assume zero economic loss in terms of output and income forgone to the UK economy from a reduction in the number of applicants. However, we still estimate expected annual earnings for the principal applicant in order to calculate percentage change in dependent volumes given that we assume both the principal and dependant have similar elasticities i.e. the dependant is equally as responsive as the principal when it comes to price changes. This is because we assume the principal makes the ultimate decision on whether or not to apply for a UK visa or immigration product.

To work out the impact of additional fees on application volumes; elasticities were applied to the proposed routes. For the Long-term UK Visitor visa routes, and Other Visas, which include some visitor routes, we used an airfare elasticity of demand of -0.46²; while for all other migrant routes a wage elasticity of labour supply of 0.5 is applied to the full expected wage during their stay in the UK, which is consistent with previous fee impact assessments. However, no empirical studies on the wage elasticity of migrant labour supply and price elasticity of high education to the UK have been found so general studies on these respective elasticities are used as an estimate: see Annex B for sources.

## 5.2 Net Benefits

The increase in fees is estimated to result in a decrease in output of £74.7m (Present Value) over the expected length of stay, and a loss in fee revenue of £1.2m (PV) over 4.4 years, from those out of country applicants who no longer come to the UK. It is estimated that the economy will benefit from an increase in government revenue of £85.7m (PV) over 4.4 years raised due to higher fees.

However, an increase in UKBA fees implies a transfer from applicants to UKBA for those who continue to apply. The Impact Assessment process counts this as a cost for UK residents (i.e. in-country applicants), but not those applying from overseas. The loss in fees from those in-country who are deterred from applying represents a financial saving to in-country applicants. These transfer costs are not included in the costs and benefits because they cancel each other out exactly. They are not costs and benefits to the economy.

<sup>&</sup>lt;sup>2</sup>Based on DfT study - UK Air Passenger Demand and CO2 Forecasts (2009)

## **Transfer Payments**

Transfers	Central Estimate (PV) 2010/11 – 2014/15
Increase in UKBA Fee income from in country applications	£129m
Additional cost of application fees to in country applicants	-£129m
Saving from deterred in-country applicants	£62,000
Lost UKBA revenue from deterred in-country applicants	-£62,000
Total	0

The NPV calculation is therefore £9.8 million over 4.4 years. The NPV range based on the above elasticity assumptions is - £27.4m to + £85.8m.

The total estimated fee income to UKBA is £214m (PV) over 4.4 years.

The key costs and benefits associated with option 2 are set out below:

## **Key Costs and Benefits of Fee Increases**

### **Key Monetised Costs**

To economy

 Reduction in fee income from deterred applications: income to UK economy (UKBA) from overseas may be deterred as a result of fee increases

Option 2: This is estimated at £100,000 for 2010/11 and £1m (PV) over the next four years.

• Reduction in output from deterred migrants: costs of lost productive output and income where migrants are deterred from coming to or remaining in the UK for work, study or visit.

Option 2: This is estimated at £6.9m for 2010/11 and £68m (PV) over the next four years.

## **Key Non- Monetised Costs**

Risks to UK economy of significant impact on volumes

## **Key Monetised Benefits**

To economy

 Increased fee income to the UK: higher immigration and visa fees will increase fee income to the UK from those that still apply to come to the UK

Option 2: This is estimated at £7.9m for 2010/11 and £78m (PV) over the next four years.

## **Key Non- Monetised Benefits**

 Option 2: Public confidence in secure borders and that migration is controlled for the benefit of the UK.

	2010/11	2011/12	2012/13	2013/14	2014/15	Total
Benefits						
Net Revenue raised from fee changes for those who continue to apply	£7,900,000	£21,000,000	£21,000,000	£21,000,000	£21,000,000	£93,000,000
Total benefits (PV)	£7,900,000	£20,000,000	£20,000,000	£19,000,000	£18,000,000	£86,000,000
Costs						
Revenue from net decrease in the volume of applications as a result of fee changes	-£100,000	-£300,000	-£300,000	-£300,000	-£300,000	-£1,000,000
Output loss from net decrease in migrants coming/ remaining in the UK	-£6,900,000	-£18,000,000	-£18,000,000	-£18,000,000	-£18,000,000	-£81,000,000
Total costs (PV)	-£7,000,000	-£18,000,000	-£18,000,000	-£17,000,000	-£16,000,000	-£76,000,000
Net benefit (PV)	£1,000,000	£2,000,000	£2,000,000	£2,000,000	£2,000,000	£10,000,000

Numbers may not sum due to rounding.

Under option 2, there is a potential net benefit to the economy of £1m in 2010/11 and £8m over the next four years (present value). The benefits to the economy exceed the costs from the fee increases. Overall we expect volumes to decrease by approximately 4,500 over 4.4 years for these routes in response to the rise in price.

#### 6. SENSITIVITY ANALYSIS

Assuming elasticities of demand and supply of 0 for all products results in no volume changes. In this scenario, there is a net benefit of £85.8m (PV) over 4.4 years through additional revenue from fees.

Assuming elasticity of labour supply of -1.1 and elasticity of demand for air travel of -1, the estimated reduction in volumes is 9,600 over the period of the IA. Revenue gained from fees, after transfer payments, is estimated at £85.6m (PV). Revenue lost from those out of country who no longer apply is assumed to be £2.6m (PV), and output loss is assumed to be £110m (PV). This results in a potential net cost of £27.4m (PV) over 4.4 years.

#### 7. MONITORING and EVALUATION

The effectiveness of the new regime would be monitored by the UKBA Charging Policy team and will cover in year checks of volumes and revenue, used to inform the annual review of fees.

### 8. FEEDBACK

Information gained from the monitoring process will be fed back into the annual review of fees.

# **Annexes**

# Annex 1: Post Implementation Review (PIR) Plan

<b>Basis of the review:</b> The basis of the review is statutory (forming part of the legislation), and we carry out a review every year when we change the existing fee levels.
<b>Review objective:</b> We regularly review our volumes of applications against projected demand with the assumption of fee changes where necessary, to reflect the cost changes or significant demand impacts.
Review approach and rationale: We do an in-depth evaluation whenever we produce an Impact Assessment for new fees. But we generally monitor data/trend, ask for stakeholder views through our taskforces etc as part of our day-to-day business and incorporate them into any new fee proposals.
<b>Baseline:</b> The current position against which the change introduced by the legislation can be measured by the volume of applications received and income generated through these fees.
Success criteria: We regularly review of volumes of applications against projected demand with the assumption of fee changes to reflect the cost changes or significant demand impacts.
<b>Monitoring information arrangements:</b> We have existing arrangements in place that will allow us to systematically collect and monitor information for future review. This is done by producing 3 to 5 yearly forecasts of expected volumes and we compare this with actuals for each year. From this information we then create a charging model which helps us generate the income required through fees.
Reasons for not planning a PIR: N/A

# **Annex 2: Elasticities of Labour Supply**

Table 1: Empirical studies of the wage elasticity of labour supply

Source	Estimate of wage elasticity of labour supply*	Measure
R. E Lucas and L. A. Rapping, "Real Wages, Employment and Inflation", <i>Journal of Political Economy</i> , 77 (1969).	Short run: 1.12 – 1.13 (95% significance)	Change in real wages on labour supply using US data 1929-1965
	Long-run: -0.07 – 0.58	
Y. Chang and S. Kim, "On the aggregate labour supply", Federal Reserve Bank of Richmond Economic Quarterly Volume 91/1 Winter 2005.	1.0	Aggregate labour supply elasticity
L. Osberg and S. Phipps, "Labour Supply with Quantity Constraints: Estimates from a Large Sample of Canadian Workers", Oxford Economic Papers, New Series, Vol. 45, No. 2. (Apr., 1993), pp. 269-291.	Between +0.1 and -0.1	Wage elasticity of labour supply in the Canadian Labour Market
P. Bingley and G. Lanot, "The Incidence of Income Tax on Wages and Labour Supply", National Centre for Register-based Research (NCRR), Version 5.002 31 October 2000	-0.4	Elasticity of labour supply in the Danish Labour Market

<sup>\*</sup>Note that the estimated wage elasticity of labour supply includes negative values indicating backward sloping or backward bending labour supply curve. This is due to the income effect outweighing the substitution effect. For a higher wage, individuals can decrease labour supply and enjoy the same level of consumption.